## LIFE IN

**FALL** | 2009

Estonians-A Singing and Dancing Nation

Internet-

Friend or Foe?

The World of Jüri Arrak

Steve Jürvetson

These Times Encourage Innovation



Fine Dining in Estonia



## New generation data communication is the foundation for smart ideas

Innovation is born when valuable ideas intersect with people who have the necessary skills to put them into practice, teamed with such essential resources as infrastructure and financing.

Just as transport- and energy connections play an important role in the general competitiveness of the state, the development of communication networks is the basis for those sectors of the Estonian economy where large volumes of data, which we can today only dream about, are exchanged. The ability to dream is useful because without it no ideas are born. However, without tangible steps those dreams will just remain wishful thinking.

Estonia wants to be a trustworthy country with good connections and a flexible economy. Therefore the state has made a conscious effort to develop its relatively new economy into a knowledge- and technology-based economy, thus creating new energy-, transportant communication connections.

The year 2009 is the year of innovation and new ideas. Through collaboration between universities and companies, Estonia has opened research and development centres, initiated the Innovation Policy and created the conditions to develop international connections, whether they are stronger links in the field of energy or friendly relations between people.

It was the year when, in cooperation with entrepreneurs, Estonia initiated a project which will enable even the smallest corner of the country to have access to new generation data communication in order to create more added value.

The Internet has already laid a foundation for various smart ideas in Estonia, for example Skype. The Internet has become just as normal in the lives of the population as electricity – often we do not notice its existence, although there are differences between Internet use in urban and rural areas.

The new generation broadband, however, will take the fast Internet everywhere, to an island with five residents as well as to a big city.

New generation broadband connections, which will allow data transfer at a speed of up to 100Mb/sec in every household and company by 2015, are at least twelve times as fast as the connections available today. In addition, communication companies have to provide services which the people and companies actually need. The base network in development will not set any limits on the kind of technologies which communication enterprises use to develop their access network connections or the kind of services they offer. It will guarantee the neutrality of the technology which is important for the creation of competition, as well as the development of technology. The development of the fibre-optic network will be our future competitive edge which, similarly to our Nordic neighbours Finland or Sweden, which invest in the creation of new generation Internet connections, depends on the increase in productiveness and competitiveness that follows from information and communication technology.

The services offered by the E-state have made the individual's relationship with the state simpler and more comfortable. They have also made the interconnections between official departments and companies more effective. For example, we take services such as the E-tax office or E-health for granted. They have given people a better opportunity to participate in economic and public life.

### Juhan Parts

I Minister of Economics and Communications

## Estonia



**COVER** Steve Jürvetson Photo by Michael Soo

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## **FALL** 2009

- 6 Where to go this season? Life in Estonia recommends
- 8 News



## 12 Song and Dance Festival: The economic crisis brought together record numbers of participants and viewers

Estonian Song and Dance Festivals have justly earned their place among UNESCO's World Cultural Heritage. This summer the festival proved that, regardless of the economic crisis, the 140-year-old tradition could attract more people than ever before, not least because of the opportunities offered by 21st century information technology.



## 18 Freedom Monument – better late than never

The Monument to the War of Independence in Tallinn was opened on 23 June 2009 as a memorial for those who fell during the Estonian War of Independence. Through the monument, the people of Estonia commemorate all those who fought for freedom and independence.

20 The State Visit of Their Majesties Juan Carlos and Queen Sofia of Spain to the Republic of Estonia in May 2009 in pictures



## 22 Steve Jürvetson: These can be great times for small innovative countries such as Estonia

An American-Estonian venture capitalist talks about his love of all things Estonian, the limitless possibilities of entrepreneurship, the newest big ideas on the horizon, and the realization at last summer's Song Festival that, for a small country, Estonia is remarkably diverse.

## 28 Playtech's manager: We close our doors to many potential customers

Juha Olavi Korhonen, the manager of the Estonian division of Playtech, a company which develops gaming software, says that the company chooses its customers very carefully and refuses to do business with many others. The effects of the global crisis cannot be seen anywhere within this business group.

## 32 IT innovation in its entirety comes to Ülemiste

Early this year, a unique hall was opened in Ülemiste City: a Demo Centre, in which various companies have assembled and integrated Estonia's most important information technology achievements. The non-profit association, ICT Demo Centre, which was responsible for building the demonstration hall, has three big objectives: co-operation, innovation and exports.



## 38 Yoga Intelligent Building set to conquer the world

The Estonian company Yoga Ltd has created the world's first self-learning intelligent building control system – Yoga Intelligent Building (Yoga IB). As a holistic system, it guarantees the functioning of a building's climate, lighting, access and security systems, and makes remote meter readings possible

## 40 Estonia will have broadband Internet coverage by 2015

The recently established Estonian Broadband Development Foundation declared to provide the whole country with fast broadband Internet access by 2015. This plan corresponds nicely to the fact that, at the end of August, Ericsson opened its factory in Tallinn, and will focus on developing high-tech production, including building appliances for mobile networks and broadband.



## 44 e-criminals are rearing their heads: who owns your computer?

In the era of the Internet, global cyber crime is spreading like the Plague. No longer is it the hobby of isolated hackers, but a source of income for the mob and a virtual weapon of hostile states. The first ever cyber-war between two states took place in 2007 when for three weeks the websites of Estonian public departments and enterprises were subject to attacks which originated in Russia. The NATO Cyber Defence Center in Tallinn has been busy with a wide analysis of the aspects of this field for just over a year now.



## 51 Portfolio – Jüri Arrak

Similarly to his own drawing of an apparition with a head of flames, Jüri Arrak appeared on the Estonian arts scene forty years ago. He painted the first post-war church altar in Estonia and is currently enjoying working on the scene of the Last Supper. Get acquainted with this versatile artist who has always something to say and whose word carries weight.



## 66 Tallinn - Cultural Capital of Europe 2011 - is building a friendship with the sea

Tallinn is situated by the sea, but it has really never been open to the sea. The Tallinn 2011 Foundation has set itself the task of bringing people back to the joys of the sea, to make the seashore something more than a port that you rush through on your way to Finland or Sweden, to give birth to an enviable cultural life in ghost palaces ravaged by time.



## 71 **50 Best Estonian Restaurants**

In 2008, the first chart of top Estonian restaurants was compiled. There were surprises, disappointments, but also a lot of genuine joy. It became clear that there are many unique eating places in Estonia, even more than expected. It was also good to hear that this list of top restaurants was long awaited.

## 77 Estonia in brief



## 78 Practical information for visitors



## **COSÌ FAN TUTTE**

Libretto by Lorenzo da Ponte, opera buffa by Wolfgang Amadeus Mozart in two acts. Premiere at the Estonian National Opera on 17 October 2009

Performed in Italian with Estonian and English subtitles.

**Arvo Volmer** 

Music Director and Conductors

Conductors: Jüri Alperten, Mihhail Gerts

Stage Director: Walter Sutcliffe Set Designer: Liina Keevallik

Cast: Heli Veskus. Aile Asszonvi. Helen Lokuta, Juuli Lill, Rauno Elp, Aare Saal, Oliver Kuusik, Urmas Põldma, Janne Ševtšenko, Kristina Vähi. Priit Volmer. Mart Laur and others.

Estonian National Opera Chorus and Orchestra

Young officers Ferrando and Guglielmo brag that their fiancées Dorabella and Fiordiligi are eternally faithful to them.

Don Alfonso lays a wager with the two

officers, claiming he can prove in a day's time that these two women, like all

women, are fickle. The young men accept the wager: they lie they are called to their regiment, but instead they come back in disguise to seduce each other's fiancées

### **BALLET EVENING**

Premiere at the Estonian National Opera on 26 November 2009

Music Director and Conductor:

Jüri Alperten

Conductor: Mihhail Gerts

### SYMPHONY NO. 2

A ballet by Uwe Scholz in one act Music: Robert Schumann Choreographer and Stage Director:

**Uwe Scholz** 

Assistant Choreographer: Daniel Otevrel

The abstract, emotionally deep and musically sensitive choreography by Uwe Scholz (1958-2004) makes use of the strict structure of academic dance as well as the impulses triggered by the sensitivity of human soul.

## **PELLÉAS AND MÉLISANDE**

A ballet by Tiit Härm in one act Music: Arnold Schönberg Choreographer and Stage Director: Tiit

Designer: Kustav-Agu Püüman

Pélleas and Mélisande, a symphonic poem by Schönberg is one of the compositions that is regarded as the last gasp of Romanticism that paves the way for the future musical traditions. The ballet by Tiit Härm has a tense and demanding dramaturgy, inspired by the play by Maeterlinck, telling a story about forbidden love between two young people.

### **BEFORE NIGHTFALL**

A ballet by Nils Christe in one act Music: Bohuslav Martin "Double Concerto"

Choreographer and Stage Director:

Nils Christe

Designer: Keso Dekker

The short ballet Before Nightfall by Nils







Christe, completed in 1985, was commissioned by Nureyev and premièred at the Paris Opera Theatre. Nils Christe's choreography reflects feelings hidden in the music of **Bohuslav Martin** composed just before World War II.

### **POLIUTO**

A concert performance of Gaetano Donizetti's opera on 11 and 12 December 2009

Conductor: Arvo Volmer Soloists: Otoniel Gonzaga, Marina Shaguch, Aare Saal, Mart Madiste, Priit Volmer, **Oliver Kuusik, Andres Köster** Estonian National Opera Chorus and Orchestra

Donizetti's *Poliuto* is less-known than his famous operas *The Elixir of Love, Don Pasquale, The Daughter of Regiment* and *Lucia di Lammermoor,* but the beautiful melodies of the opera are a fine example of Donizetti's *bel canto* style that allows the singers to demonstrate their abilities by singing complex virtuoso passages.

## **NEW YEAR'S EVE BALL**

31 December 2009

Estonian National Opera invites you to

spend the night in the magic atmosphere of the theatre – listen to the best soloists, watch a swashbuckling dance performance, and dance to the music by a big symphony orchestra! The hosts are Lady Janne Ševtšenko and Colonel Priit Volmer.

You can enjoy the merry melodies of the operetta revue "Vienna – City of My Dreams!" featuring Annely Peebo and the soloists of the Estonian National Opera, and the sparkling dance and jazz performance "Raimond Valgre – Kiss in the Moonlight" by Estonian National Opera ballet troupe, singer

Marko Matvere and the Swing Band of Villu Veski and Tiit Kalluste.

In the concert hall, you can dance to the music by **Estonian National Opera Orchestra** and the **Police Orchestra's Bigband** featuring **Gerli Padar**.

Artistic Director: Arne Mikk
Designer: Kustav-Agu Püüman
Conductors: Arvo Volmer,
Jüri Alperten, Erki Pehk and
Mihhail Gerts

There are 700 tickets available with the price of EEK 650–1200 and 400 dance tickets with the price of EEK 350. Dress code: black tie.

Ball restaurant awaits you in the Blue Hall. A bountiful supper includes warm and cold *buffet*, a dessert, a glass of wine and a cup of coffee or tea. The Restaurant is open 21.30–00.45 to all who have preordered their dinner. The bar is open with live music. Price EEK 750.

### www.opera.ee





## NTTDOO

Tallinn, 20.–25. X
International festival of new music NYYD'09

The festival is a member of the European Conference of Promoters of New Music, the Réseau Varèse network, the Estonian Music Festivals Artistic directors Erkki-Sven Tüür and Madis Kolk

The eleventh edition of the NYYD Festival will concentrate on music theatre and multimedia projects. The featured composers will be Heiner Goebbels (Germany) and Georges Aperghis (France). Major multimedia works from both will be performed: Théatre Vidy-Lausanne (Switzerland) will bring ERARITJARITJAKA by Goebbels, Paris IRCAM ensemble will present MACHINATIONS by Aperghis. Two world premiere works are commissioned by the festival: chamber opera EXPLORATIONS OF THE INDIES by Märt-Matis Lill performed in collaboration with Von Krahl Theatre and Voces Musicales and a new dance theatre work by Mart Kangro to be performed by the Ensemble U:. The Shout (London) will present FLAM, a chamber theatre work by Orlando Gough. The Estonian National Opera will perform during the festival the opera THE FORMULA OF LOVE by Mari Vihmand.

www.concert.ee

Tel 614 7760





small area of land occupied by the house mean that the house can be built without having to apply for a building permit; only the written approval of the local governmental authority is required. Rene Valner says that one of the starting points for the development of a modular home in accordance with the passive building standard was to make sure that the concept could be developed further to create an energy-plus building. The owner of this type of building can sell the excess energy produced by the building to the supply network. In Estonia, this is unfortunately not yet possible for residential customers.

The first solution in Europe for innovative **zero energy modular homes** was developed in Estonia

The Estonian company ultraKUB OÜ has developed an innovative energy-efficient modular home solution called Elumaja, which transforms the current understanding of construction and the general way of life for all people. This is the first zero energy modular home concept in Estonia, and also in Europe.

At the end of June, a sample home was built in Rotermann Square in Tallinn and everyone was able to come and see it for themselves.

The innovative concept is a development of the passive building standard, which aims to create an energy-efficient, mobile, comfortable and healthy building with the minimum ecological footprint. Architect Rene Valner, the author of the new Elumaja concept, says that this is a modular home that has been designed in compliance with the requirements for zero energy buildings, and it has a standardised production process. "A home with zero energy requirements means that the home will not consume any more energy than the building is able to produce. If the customer does not wish to purchase autonomous energy equipment to create a zero energy building, they will end up having a passive building which has heating costs ten times lower, on average, than a regular building," he explained.

ultraKUB OÜ is the first company in the Estonian market to offer an innovative, complete solution for the construction of a sustainable modular home. In the case of the passive building standard, the energy required annually for heating the building does not exceed 15 kWh per square metre. The new modular home allows the use of autonomous renewable energy solutions and, by means of these solutions, enables its occupants to live (if necessary) independently of a central infrastructure, that is, with zero CO2 emissions. In this case, the house will meet the zero energy criteria. Also, a wider use of such buildings will increase the country's energy independence.

An Elumaja home consists of a 45 square-metre energy-efficient base module (with healthy indoor conditions) and other modules that can be added to it. The underlying principles of the concept are to make it suitable for our climate, to meet the highest quality standards and to make it available to customers with varying financial means.

Zero dependence on existing utilities, the mobility of the module and the

The company also plans to offer modular homes built according to the Elumaja concept in the markets of Nordic countries and other nearby countries. So far, the Elumaja concept is the first complete solution for this kind of modular home in Scandinavia and in Europe as a whole.

## Tehnopol launches a springboard project for companies

The Tallinn Technology Park, Tehnopol, and its five partners from four different countries have launched a joint project under the Central Baltic Interreg IVA programme, which is intended for small and medium-sized companies and which aims to boost international business and expansion.

The aim of the project is to significantly facilitate the entry of companies from the Baltic Sea region into the markets of other countries in the region. In order to achieve this, the project partners will conduct market surveys and offer market-based consultations, partner searches and joint training services. Companies from all four partner countries have been included in the development of the service packages.

As a result of the project, companies operating in the Baltic Sea region will have greater opportunities for expansion and the export risks of companies will be significantly reduced.

Tehnopol's partners in the Central Baltic Interreg IVA project, to be carried out in the Central Baltic programme area, are the SA Tallinna Ettevõtlusinkubaatorid foundation, the Small Business Centre of the Helsinki School of Economics, the Latvian Technological Centre, the HUMAK University of Applied Sciences in Finland, and the Mjärdevi Science Park in Sweden. The project is funded by the European Regional Development Fund.

## **Modesat** launches the world's first 1024QAM modem

At the Tel Aviv High Technology Show 2009, in March, Modesat Communications introduced the first super-fast modem to use 1024QAM modulation in the communications industry - this is an important technological advance in increasing the throughput of 3G/4G transmission networks.

The final bottlenecks for transmission networks are base stations and the transmission network connecting to the network centre, where radio links are used in 72% of cases. But the radio frequencies used for the operation of the links are a limited resource, forcing communications providers to search for technologies that will allow an increase in data transfer rates while using the same frequency resources.

Modesat's unique solution, which is based on 1024QAM modulation, makes it possible to offer up to 30% higher data transfer rates, and at the same channel width; it is also significantly more reliable when communications link conditions are poor, and it is cheaper than previous solutions.

Javarebel by Webmedia won a productivity award at the software industry's Oscars

At the Jolt Product Excellence & Productivity award ceremony in the USA, Javarebel, which is an innovation that was created by the Estonian software company Webmedia, was declared a Productivity Winner in the Utilities category.

Over the last eighteen years, the Jolt Awards, considered to be the software industry's Oscars, have been presented for books and products that have 'jolted' the industry with their significance and have made programming faster, easier and more effective.

Webmedia's development manager, Ivo Mägi, says that the inclusion of Javarebel in the five nominations in the competition was an extremely important vote of confidence. "The fact that the Jolt jury considered Javarebel to be a product that stands out among those top five proves once again that our developers are world class," added Mägi. "Well done!"

Javarebel was developed by Webmedia's research and development division in order to increase the work efficiency of Java developers. With Javarebel,

"The reason we decided to present the next leap in modem technology in Israel is that Israel is one of the world's leading development centres for high-tech and communications technology. We also opened our office there, in cooperation with RFcell Technologies as our local partner," added Peep Pöldsamm, president and CEO of Modesat.

Modesat Communications is a leading modem technology company, with research and development centres in Estonia, Belarus and Russia, and with offices in the Silicon Valley (USA), Tel Aviv (Israel), Tallinn and Gomel (Belarus). The company's majority shareholder is Ambient Sound Investments (ASI), an investment company which is made up of the same engineers who established Skype.



you can check the behaviour of programs written in the Java programming language almost immediately after making changes. With the traditional procedure, after making each change in their code, developers would have to wait for perhaps dozens of minutes for the result, depending on the size of the application, which decreases a programmer's work efficiency.

Jevgeni Kabanov is the leader of the Webmedia R&D team and a co-author of Javarebel's concept. Javarebel is marketed under the Zeroturnaround trademark and today licences have been sold to almost every country in the world. The award-winning invention is used by more than 10,000 programmers and tests have shown it to increase work efficiency by at least 8% per day. Javarebel is patent-protected in the USA and the European Union.



## Scientist **Jaan Einasto**received Marcel Grossman Award

On 13 July, the distinguished Marcel Grossman Award was presented to cosmologist Jaan Einasto in the UNESCO headquarters in Paris for his pioneering contributions in the discovery of dark matter and the cosmic web and for fostering research in the historic Tartu Observatory. UNESCO has named 2009 the year of astronomy. The Marcel Grossman Awards Ceremony is one of the most festive events of the astronomy year, and over 500 delegates of the 12th Marcel Grossman Meeting participated.

During the formal ceremony, Einasto thanked all those present for the honour presented to him and added that although the award is personal the astrophysicist still sees it as an award for the entire Tōravere crew.

The award has been given out by the International Centre for Relativistic Astrophysics (ICRA) and the International Network of Science Institutions (ICRANet) since 1985 to recognise outstanding achievements in theoretical physics and cosmology. Along with Jaan Einasto, the award was also given to Christine Jones for contributions to X-ray studies of galaxies and galaxy clusters and to Michael Kramer for contributions to pulsar astrophysics. The Institutional award will go to the Institute of Higher Scientific Studies (France).

## The Study Information System, created by Estonians, is implemented in Denmark

The Study Information System, developed with the participation of the development team of the Estonian-based company Fujitsu Services, will be introduced in Denmark this year, in the Copenhagen Business School, which has 17,000 students. The aim of the Study Information System, created by Fujitsu, is to improve communication between students and Departments of Academic Affairs, and to reduce the number of documents on paper and the additional expenses associated with them.

The company's Project Manager, Mr. Lauri Teder, stated that there are many students at universities and even more data on them to be administrated. The aim of the Study Information System is to make the study process flexible so that it is more convenient and effective for students and teachers, who can have access to, and obtain sufficient information from, the University Information System at any time and place. "Up until now, you had to go to the university to register and sign up, but now the student can do this directly through the information system without leaving home," explained Teder.

Similar systems have helped to reduce the use of paper documents, saving a significant number of trees. It should also be possible to reduce personnel-related costs, as there is no longer a need for employees to receive the documents.

The experience gained during the set-up of the Study Information System at the University of Tartu and the Tallinn University of Technology was utilised in the creation of the Study Information System sold to Denmark. The team, previously called Mandator Estonia and now a member of the Fujitsu Services group, have worked for years to ensure that innovative solutions developed here can also be sold to the rest of Europe.

"If we take a look around the world, we can see that, in many countries, universities and Ministries of Education are still functioning in the old way. Estonia, however, has been very successful in developing the innovative Study Information System for the field of education," said Ms. Ülle Kivirähk, Sales Director of Fujitsu Services.

## Dental treatment

## can be relaxing

Most people are prone to the fear associated with medical treatments. One of the most frightening things for many is a visit to the dentist. But the continuous development of dental technologies means that dental care has now become painless in most cases. Nevertheless, it is still difficult to mentally overcome the fear of the dentist. Or is that really so?

The company iComTV, which operates in a business incubator for start-ups and new business ideas in the Tallinn Technology Park called Tehnopol, has found a solution which diverts the thoughts of patients undergoing dental treatment and even makes it a pleasant experience.

The essence of it is simple. Dental care practices are equipped with ceiling-mounted LCD screens which show relaxing and entertaining video clips. The clips have been specifically produced to divert patients' thoughts from the treatment. The commercial-free clips feature nature, sports, scenes from outer space etc. By watching these videos while in the dentist's chair, the patient takes home a more positive experience from the treatment session.

The LCD screens are connected to a compact digital network which enables the user to change the clips and manage the entire network. It is therefore not necessary to load the clips from CD or DVD discs. The solution is designed for everyday, fully automated use which does not require any user intervention.

The portal Fortumo.com, developed in Tartu and intended for the creation of self-made SMS services, has made its service available in the Czech Republic and in Malaysia. Within the coming months, the company promises to also launch its services in other attractive countries in both regions.

"Internet enterprises have started looking eastwards in recent years, some closer and some further away. As many portals use SMS services for profit, Fortumo is a natural partner for the expansion of such companies," said Mr. Rain Rannu, Member of the Board of Fortumo.

Fortumo allows everyone to create a mobile service within five minutes without any specific skills. In addition to Estonia, it is now possible to create services in a dozen other countries.

"The Czech Republic and Malaysia are at the world's forefront in the field of mobile services and Internet applications, which should make both countries very attractive places for Internet enterprises," said Mr. Martin Koppel, Marketing Manager of Fortumo. "While in the Czech Republic there are 30% more SIM cards than residents, the average person in Malaysia sends around 20 text messages a day," added Koppel..

The primary customers of Fortumo are Internet-based communications, information, entertainment and business environments, and Internet portals, as well as radio stations, local newspapers and advertising companies, which have at present established more than 44,000 services in thirteen countries.

Fortumo Eesti OÜ, which operates the Fortumo.com portal, is a subsidiary of the leading mobile services provider Mobi Solutions OÜ (mobi.ee).

The screens are beneficial both for the patient and the doctor. According to the dentist Dr. Alon Rass, patients are less tense and fearful due to such entertainment: "This is much more convenient for the dentist, and the patient will have a pleasant memory of the visit. With some fearful patients, the video running on the ceiling screen is like the end of a lifeline which can be grasped in a helpless situation. Patients fix their gaze upwards and stop making sharp, nervous movements, which at the time of the treatment can be potentially dangerous," said Rass.



According to iComTV's Manager Marco Rüütel, dental treatment is one of the areas where interactive media can be successfully implemented. "iComTV deals with digital media and innovation at large. It is therefore the company's ambition to offer interesting media solutions both in Estonia and elsewhere in the world," said Rüütel. "The media solution for dental patients is unique in this field and it is pleasant to note that it has received a warm welcome from dentists as well as patients," Rüütel added.

So far the system has reached about ten dental practises in Estonia, but the number of new projects is growing quite rapidly. The goal of iComTV is to soon reach the dental practises of neighbouring countries, and also to become the leading provider of other multimedia products in the international

## Fortumo, a portal for SMS services, expands to Malaysia and the Czech Republic







the economic crisis brought together record numbers of participants

Estonian Song and Dance Festivals have justly earned their place among UNESCO's World Cultural Heritage. This summer the festival proved that, regardless of the economic crisis, the 140-year-old tradition could attract more people than ever before, not least because of the opportunities offered by 21st century information technology.

## I LAND AND PEOPLE



It is Saturday, 4 July 2009. They are coming in thousands. An army of singers and dancers has conquered Tallinn. People clad in folk costumes, with patterns which date back centuries, are around every street corner, not to mention young people wearing funkier ethnic T-shirts. It takes six hours for the thirty-seven thousand participants to march from the city centre to the Song Festival Grounds and the parade is greeted by ovations from the audience and a sea of blue-black-white flags.

They march, singing and dancing, accompanied by brass instruments and

squeeze boxes. It is a whole performance in itself, with funny slogans and pregnant women being pulled along in wheelbarrows, not to mention mothers who are nursing their newborn festival participants right there in the middle of the parade. There are also hunched old men in their eighties supporting themselves on thick pine sticks. Whole families, with children, parents and grandparents, are going to the most important party of the nation. The first ever Egyptian-origin Estonian folk

dancer, Hazem, is among them. He comes from the US Seattle group, where Estonian folk dancing has infected even Latvians, not to mention Americans. There are Russian children's choirs from north-eastern Estonia singing

in Estonian. And there is Auntie Lilli from the Estonian village Sulev in Abkhasia, who has dreamt about participating in the celebrations for a long time. Edda, a cultural leader and folk dancer from the furthest corner of Estonia, Võru County, set out on her trip to the capital at sunrise on Monday morning and has spent the whole week in rehearsals at the stadium, eating fish soup brewed in large cauldrons and sleeping on a mat on a school floor, having asked her relatives to keep an eye on her house. Another participant is Tõnn, a student whose pace measuring watch showed nearly fifteen kilometres danced in one rehearsal day!

## Sun and tears

Estonians have the habit of shedding some tears when faced with great beauty or emotion which cannot be contained. They also have the tendency to use song and dance as a weapon against evil, drawing strength for what's ahead by singing and dancing and expressing grief.

Due to the number of participants and spectators, the first Song Festival concert was over an hour and a half late getting started. When the 25,000 singers finally started in unison with "Koit" ("Dawn" is the song which always



opens the Song Festivals – ed.), there were tears of joy in the eyes of the spectators. The next day brought a record-breaking hundred thousand people together to the Song Festival Grounds.

At the opening of the Dance Festival, tears were also shed by the audience, which gave a standing ovation to the 'biggest hug in Europe', when three thousand dance partners met in the middle of the stadium, hugging and kissing to a song telling the story of a long wait.

After the festival, the general manager of the Dance Festival—with a marine theme this year—Ülo Luht, could only say, "We wanted to create the best dance party in Europe, but we managed to create the best in the world." Angela Arraste, Professor of Choreography at the University of Tallinn, admitted that the show reached a level of perfection, as what up to then had been single dance pieces were joined into a whole performance. Behind the entrance to the festival grounds, thousands were shedding their own tears of disappointment at not having bought their tickets on time and missing the sold-out show. The festivities this year were called 'To Breath as One' (ÜhisHingamine), which the organisers explained as follows: "Breathing as one can change the course of history. Such resonance has broken metal and

brought down political regimes. But this is not the only reason to breathe as one. At these celebrations, we meet those who danced and sang before our time and our contemporaries whose souls we don't always notice in the day-to-day scramble. When you breathe as one, it doesn't matter if you are facing the audience or the performers, or whether you are entirely somewhere else... This breath in unison will come again..."

## **Heated debates**

At the turn of the century, it was passionately debated whether song festivals—a leftover of the 19<sup>th</sup> century National Awakening—had a future in Estonia. People were enjoying the fruits of economic growth, counting cash instead of reading music.

A large impetus for rediscovering the foundations of national culture came from the 'Bronze Night' of 2007, when gangs of youths ran amok and looted the city centre of Tallinn. The Youth Song Festival, which took place a month later, attracted an unprecedentedly huge crowd to sing national songs together with choirs. This is a tried-and-true custom of Estonians, to stand up to violence with the force of song and dance.

## I LAND AND PEOPLE





Another, and perhaps more important, reason for the new-found popularity of song festivals was the economic crisis. Professor Marju Lauristin, one of the ideological leaders of the Estonian re-independence movement, stated that economic downturns and unemployment force people to pay more attention to spiritual values. She was right, as Estonia, having plummeted from one of the fastest economic booms to a near ten per cent unemployment rate, attracted probably the largest number of unemployed people to the celebrations this summer. For them and for many others who are experiencing the crisis first-hand, the Song and Dance Festival and participation in choirs and dancing groups during their spare time was an emotional balm, a necessary tonic to keep them going.

"The organisers can feel the effect of the economic crisis - we have to get by on very little. Leaders of the singing and dancing groups recount tales of people who had lost jobs and could no longer travel to rehearsals. But the general attitude is that such a celebration is especially needed now that times are hard," said Lili Välimäe, the organizer of groups from Järva County.

Record numbers, over forty thousand, applied to take part in the Song and Dance Festival this year, which produced new debates, as the festival grounds do not have enough space for all the performers. Is it justified to leave out those thousands who spend their spare time and their money on those hobbies? Perhaps the repertoire is too difficult? Such questions were asked for months in the media and attracted a wide range of opinions from hundreds of people.

## Internet replaces the dance teacher

The most difficult part of the five-year preparation period for every Song and Dance Festival is teaching the repertoire to people who are not necessarily trained in reading dance descriptions or music. Before this festival, the organisers loaded the repertoire, together with tutorials by conductors and dance teachers, onto YouTube, where it was used frequently. Hillar from Rakvere, who has been a dancer for thirty years, was a bit depressed before the celebrations and decided to pull out because one particular dance was too difficult to learn. Yet a couple of weeks later, the 67-year-old gentleman was teaching the steps to his dance group, having mastered them by

spending several evenings online repeatedly watching the dance videos and trying out the steps. The diagrams showing where exactly each dancer had to be in the stadium during each part of the dance were also downloadable from the Internet. In addition, the organisers created both Estonian and English language blogs, which gave people up-to-date information on organisational matters. Younger people were attracted to Facebook and Orkut, where discussion of the festival was lively. In addition, festival posters could be downloaded as computer screen backgrounds.

The organisers also made use of the last word in Internet innovation, Twitter, which tweeted organisational news into people's mobile phones, not to mention the hundreds of photos in the Flickr environment. The Internet has proved especially valuable in bringing young people to the 140-year old Song Festival and the 75-year old Dance Festival. On the day when they published the names of the groups that had been selected to take part, the server of the Song Festival organisers broke down. There were simply too many people interested.



## The triumph of marketing

The Song and Dance Festival involved more than just singing and dancing; it also was a triumph for national marketing. Whereas for years the Estonian media had been full of arguments about the lack of Estonian souvenirs or their lack of lustre, everything changed this summer. The local sock manufacturer Suva came out with socks which have Song and Dance Festival



patterns. Various other 'ethno trendy' products also went on sale. A group of active young people ordered tennis shoes from China with patterns of Estonian folk costumes on them. Those items were a huge hit, with masses of people queuing up to purchase shoes at the festival – this somewhat resembled the rush for such rare goods as toilet paper during the last days of the Soviet Union. The second coming of products with folk ornaments didn't stop there – computer producers brought a laptop with ethnic patterns onto the market

A couple of months after the Song Festival, the newly popularised folk patterns found their way to a jogging suit which the First Lady of Estonia, Evelin Ilves, presented to Madonna after her concert in Tallinn. Two and a half million letters carried Song Festival stamps, and many kids enjoyed Song Festival ice cream much more than any other sweet treat. The broadcasts of the Song and Dance Festival on Estonian Television set new viewer records. The Song Festival broadcasts attracted an audience of 163,000, the parade 156,000, and the live Dance Festival 136,000. The Second Channel of ETV broadcast the recordings of the festival from the previous day, thus creating a great emotional atmosphere. A day after the first Dance Festival performance, the DVD of the performance was already on sale. Those sold like hotcakes.

## What next?

The Finnish President Tarja Halonen, who was in Estonia during the Song and Dance Festival, told the news portal Delfi that it would be a good idea to organise a joint Baltic Sea Song Festival in the future. Inspired by the thought, the activists of the Finno-Ugric movement emphasised that this kind of event would need to have a deeply

Finno-Ugric identity and take the message of the 25 million Finno-Ugric peoples all around the world. And in addition to the music of Finns and Estonians, this festival should involve the music of Carelians, Ingrians, Saamis, Setos and Livonians, as well as groups from those areas.

One thing is for certain – the next party—the Youth Song and Dance Festival—will take place in 2011, when Tallinn will be the Cultural Capital of Europe. Folk dance enthusiasts have promised to have the whole of Europe dancing the well-known Estonian dance "Kaera-Jaan", making use of all the opportunities offered by the contemporary eworld. Will we witness a new miracle?

## To Breathe as One' in numbers 🔀

Over 37,000 singers, dancers and instrumentalists participated in the  $25^{th}$  Song and  $18^{th}$  Dance Festival 'To Breath As One'.

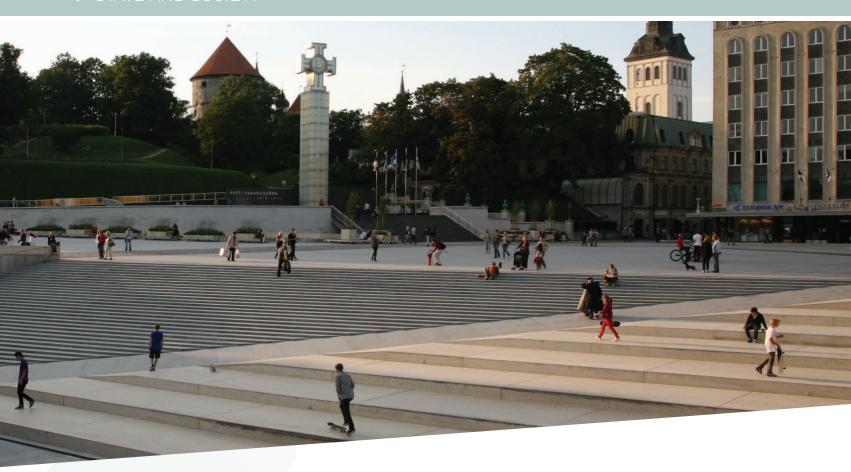
The festivities opened on 2 July with a concert at the Tallinn Town Hall Square. This was followed by three Dance Festival performances of "The Sea" and two performances of the Song Festival.

Participants in the Song and Dance Festival included 84 choirs and orchestras, with 26,430 singers and musicians, and 534 dance and gymnastics groups, with 7,460 dancers and gymnasts. In addition, there were 41 groups from abroad, with 1,340 singers, dancers, gymnasts and musicians from the United States, Belgium, Spain, Canada, Norway, Sweden, Germany, Finland, the United Kingdom, Denmark, Ukraine, Hungary and Russia.

During its three days, the Song and Dance Festival was visited by 153,900 ticket holders. All three dance performances were sold out, each one attracting 11,300 viewers. The first day of the Song Festival included 52,000 ticket holders and the second day 68,000. In addition, there were participants, tutors and accompanying people.

Together with the main rehearsal of the Dance Festival, the audience for the festival was over 165,000 people.





## Freedom Monument - better late than never

The Monument to the War of Independence in Tallinn was opened on 23 June 2009 as a memorial for those who fell during the Estonian War of Independence. Through the monument, the people of Estonia commemorate all those who fought for freedom and independence.

## War of Independence and the Cross of Liberty

The Estonian War of Independence was a defensive campaign of the Estonian Army and its ally, the White Russian North-western Army, against the Soviet Western Front and the Baltic German Landeswehr offensives in 1918–1920, in connection with the Russian Civil War. The campaign was the struggle of the Republic of Estonia for sovereignty in the aftermath of World War I. It resulted in a victory for Estonia and was concluded in the Tartu Peace Treaty, through which Russia declared that it would give up all claims against Estonia and unconditionally recognize the independence of the Republic of Estonia. In this war, the Estonian side lost 6,275 men and women, with many more injured.

Estonia was not alone in the War of Independence. Great Britain was the first to answer Estonia's call for help and sent a naval squadron to Tallinn on 12 December 1918. This provided coastal defence until Estonia could build her own navy. The British fleet also brought armaments and other military

equipment for Estonia. The United States of America helped Estonia with humanitarian aid. The greatest number of volunteers came from Finland, which sent 3,500 men to Estonia; smaller units also arrived from Denmark and Sweden.

In turn, Estonia helped Latvia to create her army. In the summer of 1919, two of the three Estonian divisions operated in Northern Latvia, clearing it of the troops of the Red Army. In June 1919 this led to an armed conflict with the remaining Baltic Germans, who tried to maintain power in Latvia. In the decisive battle near Cesis (in Estonian: Vōnnu), on 23 June, the Estonian-Latvian forces crushed German resistance. This day is now celebrated as Victory Day in Estonia.

To recognise the service of participants in the War of Independence, the first Estonian state decoration, the Cross of Liberty, was created in 1919. Strict guidelines were followed in awarding the Cross of Liberty, so it became Estonia's most distinguished award. The first seven Crosses of Liberty were

awarded in August 1919 to officers of the US Red Cross, which helped Estonia during the War of Independence. Altogether 3,224 Crosses of Liberty were given out. Among those decorated with the Cross of Liberty were Estonians, Finns, Britons, Russians, Swedes, Baltic Germans, Danes, Latvians and Poles, as well as representatives of many other nationalities.

The most famous holders of the Cross of Liberty included King Albert I of Belgium, King George V of the United Kingdom, Danish King Christian X, Swedish King Gustav V, British Prime Minister Winston Churchill, Prime Minister Władysław Sikorski and Marshal Józef Piłsudski of Poland, French Prime Minister Georges Clemenceau, Latvian President Kārlis Ulmanis, and Finnish President Kaarlo Juho Ståhlberg.

Along with deserving individuals, the Cross of Liberty was also awarded to the city of Verdun in France, where one of the bloodiest battles of World War I took place. The allies that helped Estonia in the War of Independence were honoured by placing Crosses of Liberty on the Tombs of the Unknown Soldier in Great Britain, France and Italy.

The designer of the Cross of Liberty was the famous Estonian artist Nikolai Triik (1884–1940).

Bestowal of the Cross of Liberty was terminated in 1925. However, the possibility of awarding the Cross of Liberty as a military decoration was preserved, and the guidelines for awarding it still exist in today's Decorations Act. The last holder of the Cross of Liberty, Karl Jaanus, died on 6 October 2000 in Estonia

## Preserving the memory of the War of Independence before and after the Second World War

In addition to honouring the most remarkable soldiers in Estonia's War of Independence and allies that served the Estonian nation, Estonia also wanted to preserve the memory of all those who fought in the war. Many local monuments were established in memory of the War of Independence, but there was no central memorial, one dedicated to the whole nation. The idea of creating a War of Independence memorial dedicated to the people was born in 1919, before the war had even ended. In 1936, a law was passed to construct a national memorial monument to the War of Independence, and the plan was to unveil the victory memorial on the 25th anniversary of the Republic – 24 February 1943. The plan was halted due to the Second World War and its aftermath.

In the second half of the 1980s and the beginning of the 1990s, most of the Independence War monuments that had been destroyed during the occupations were restored through community initiatives. The issue of creating a national monument to the War of Independence also came up once more.

## The creation of the Monument to the War of Independence in Tallinn

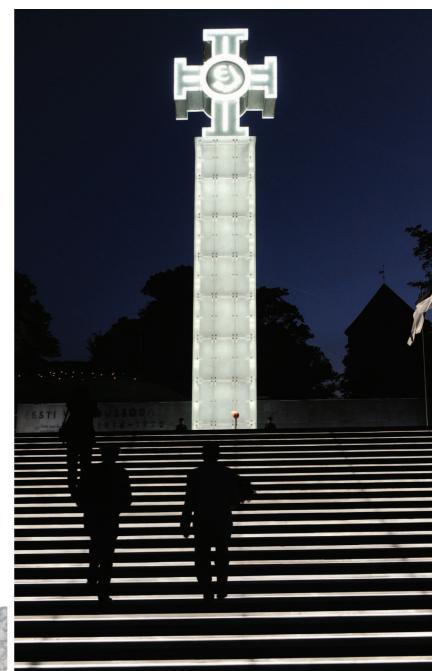
In spring 2005, the Riigikogu decided to create a War of Independence victory monument in Tallinn's Freedom Square, thereby realising the concept that was formulated back in the time between the two World Wars.

In 2006, a competition was set up to find the best design idea for the War of Independence memorial. The competition guidelines stated that "through the memorial, the Estonian people will show respect and recognition to those

who, gun in hand, established our independence, as well as those who have stood up, through words or weapons, on behalf of Estonia's freedom and independence". There were over 40 submissions to the contest. The winning entry, "Libertas", was designed by the young engineers Rainer Sternfeld and Andri Laidre, and the architects Kadri Kiho and Anto Savi.

In the winning design, a central role is played by the Cross of Liberty, which is Estonia's national service award with the most prestigious history, and the most important symbol of the War of Independence. The use of the Cross of Liberty as a symbol in the victory memorial to the War of Independence is nothing new – the Cross of Liberty as a motif has been used on many local memorials to the War of Independence created before World War II and later restored. The 1st rank, the II division Cross of Liberty on the memorial – the highest recognition for personal bravery – has never been conferred on anyone. Now it is being used to symbolically honour all of Estonia.

Ninety years after Estonian troops gained victory over the Landeswehr in the Battle of Cesis, a victory monument for those who fought for freedom was unveiled in Tallinn. The pillar is 23.5 meters high and consists of 143 glass plates. The memorial incorporates the Cross of Liberty, Estonia's most distinguished award, established in 1919.



## I STATE AND SOCIETY





## The State Visit of Their Majesties Juan Carlos and Queen Sofia of Spain to the Republic of Estonia

4 - 5 May 2009

Photographer: Erik Peinar



















# These can be great times for small innovative countries such as Estonia

An American-Estonian venture capitalist talks about his love of all things Estonian, the limitless possibilities of entrepreneurship, the newest big ideas on the horizon, and the realization at last summer's Song Festival that, for a small country, Estonia is remarkably diverse.





There was a time when Estonia was for Steve just something very abstract: a country cherished by his parents, but not to be found on the map, a place with the strange language his mother and father used when they didn't want small Steve to understand, a land on the borderline of fantasy and reality.

But in 1989, when he had his first chance to visit Estonia, it was love at first sight. "Sure, there were places with Soviet architecture, but all around the buildings it was as if the flowers were blooming. It was very touching," Steve recalls. "I had a deep source of pride and sense of honor in my heritage."

And his family's heritage is notable. Steve's father's great grandfather's brother was Konstantin Päts, the first president of the Estonian Republic between the world wars. "In my childhood, my father often recalled that, at the age of five or six, he was riding his bike at the presidential residence in Estonia. It is almost like knowing (the residents of the) White House when you are growing up. For me that was remarkable."

Even then – during his first visit to Estonia, which was just emerging from a half-century long isolation - Steve noticed that, in their rush from the Soviet system to the free world, Estonians were rather enterprising. "It truly seemed that everyone had great hopes and an entrepreneurial view of the future," he remembers. "There was this great excitement about the Iron Curtain being lifted and the new world of possibilities they were in."

Fast-forward 20 years, and he is still struck by Estonia's entrepreneurial spirit. Like one of the start-up companies he and his business partners invest in. "Great parallel, isn't it?" he asks excitedly. And he often and easily gets excited while talking about great ideas that could change the world.

"When a country, like a start-up company, looks for ways to interrupt business as usual, it is very interesting to me," Steve says. "Estonia has done just that – with its e-government and e-voting, its emphasis on innovation on every level."

He mentions that this analogy did not occur to him before his most recent trip to Estonia, last July. But when he was in Estonia it struck him that the potential for a new economy, in the broadest sense, is now far greater that it could have been 20, 30, 100 years ago.

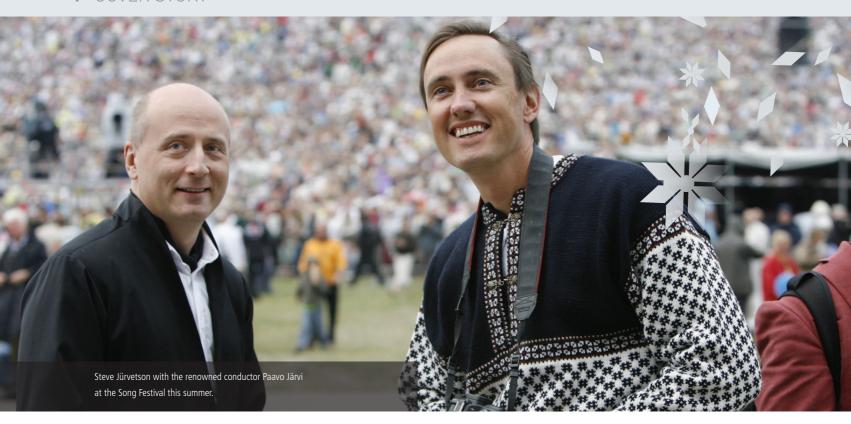
"Just as a start up company can thrive in an environment where there is change, whether economic disruption, technological change that accelerates, or any number of other factors - deregulation or changes in laws - whenever the economic playing field changes, new entrants have a greater chance of rising," he declares. In other words, at times of pure stability, predictability, and no technological disruption, only large old companies thrive, while small ones get crushed. The same is true for countries.

Estonia went through the biggest changes during the 1990s. But now, at the height of the global economic crisis, which has affected the development of Estonia in very direct ways, slowing it down, Steve sees new possibilities again. "These can be great times for small, innovative countries such as Estonia," he opines. He adds a second later, "Of course, if they themselves actively look for opportunities."

What Estonians should surely avoid is thinking that they know all the answers, and that if they continue to march in the direction chosen two decades ago, they will arrive at prosperity. This would be a backward track, warns Steve. Now is the perfect time to explore new markets and ideas, turning challenges and threats into opportunities - whether cyber-security (a field Estonia is taking very seriously) or any new Internet solution. "That is the behavior you expect from a new company," he adds, "and from a new economy like Estonia's."

Steve is remarkably well informed about Estonia's business environment, especially start-ups. "I receive some business plans almost every week from Estonia," he mentions, "and I do pay close attention to them, of course." Not all plans get his support, but he has invested in several Estonian endeavors - Skype, E-Gene, and a real estate fund in Tallinn, and he has bought a number of public stocks of Estonian companies. "But I really am interested in almost everything that is going on in Estonia," he says. "I want to visit as often as I can. Bring friends there." "It almost sounds like an addiction to all-things-Estonian," I say, interrupting him and making him laugh. "Absolutely. Addiction. There is no doubt about it. I almost hesitate when declining any proposals from Estonia, trying to think if there is any other way I can be helpful, even if we cannot invest or it does not look like our kind of investment. There is a special affinity I have for any new project coming out of Estonia. That is true."

## I COVER STORY



But, what about newcomers from Estonia? The fact that Skype's brains are based in Tallinn is rather well known in Silicon Valley. Can any other Estonian company replicate their success?

"Of course they can. But for it to be visible in Silicon Valley, the company clearly has to have a global footprint," says Steve. This is not a place for an industrial supplier for the European market, for example. While no one really knows what the next company that captures the world's attention might be, Steve pays close attention to two fields.

"OK, let me first say that, as a firm, DFJ is very excited about the energy and clean tech market, as well as the consumer Internet. Those are our two big investment areas," he says. Personally, he is most excited about the latest breakthroughs in synthetic biology, or synthetic genomics, where the code of life could be written like a computer program. Applications from those breakthroughs could be in anything - from how to turn waste into clean fuel to how to purify water. "I call it Industrial Biotech 2.0, a real renaissance of learning and explosion of new techniques and capabilities," explains Steve.

"But to give you a sense of the diversity of my interests, I still think the consumer Internet is one of the most exciting opportunities for the rapid growth of new ideas," he continues. "And that may be more relevant to Estonia." As he sees it, the world is just beginning to come to grips with the power of connecting people. And beyond Skype there are still many new opportunities to communicate.

Steve is on the board of a company that promises, in the coming months, to revolutionize the landscape of web searches. "It is a new search technology that is fully peer to peer," he explains. "Just imagine: the Skype of search, where everything is distributed across desktops; there are no web-servers, no web-crawlers, yet you provide a search experience that, in many ways, is as good as or better than Google for certain types of searches."

While Google looks back – to archives and libraries - the new engine searches the web for real time information: what is the latest, greatest, most popular of any given topic? Instead of analyzing the structure of the web, it looks at what people actually do, where they surf, where they spend time, and what pages they frequent.

"Actually, this whole idea could have easily been developed in Estonia," Steve says. "In fact, I tried to persuade a number of folks on the Skype team to join this effort early on. But they thought it would not work."

But it was made to work and in a 'new country' like Estonia. In Serbia.

"What is also remarkable," Steve adds, "is that these 40 people in Serbia who built the engine are mostly high school students, brilliant young people without any formal education, without any prior business experience whatsoever. But really smart, great in math. And what they developed is perhaps the best search technology ever conceived."

We are actually talking with Steve a day after Estonian President Toomas Hendrik Ilves stressed the importance of learning sciences. "It is regrettable," the President noted in his speech at the opening of a new academic year, "that the number of students who graduate from basic schools with a specific interest in sciences is too small in Estonia." The arts of sales and company management, the nowadays-popular soft sciences, only become important once there is something to sell and manage, according to the president. "A knowledge-based economy means substantial knowledge in the sphere of mathematics, psychics, chemistry and biology," he added.

"I applaud these remarks," says Steve, who has Master degrees in both hard science and soft marketing science. After a fast ride through Stanford College – he finished his Bachelor of Science, Electrical Engineering degree in 2.5 years, graduating first in his class - he received an MS in Electrical Engineering and also an MBA from the Stanford Business School.

## ABOUT STEVE..

"My hope is that Estonia will not follow the example of the United States, and much of the rest of the world, where people have false heroes who are basketball stars or pop idols," he says. He mentions some countries – notably China – where math and science experts, and Nobel laureates, are children's idols. "Not the slick businessman, or the marketer or the sales person, but the inventor, the scientist and the engineer – they are the true heroes of any economic renewal."

Of course, it is hard to say how a country can create such an environment, he adds. But it would obviously be a good thing if society found its true heroes, rather than following hyped up false role models. "In a movie star or sports star, there is really not much for the average person to imitate," Steve says, admitting that for Estonia he has an idealistic streak – a hope that it can be different from other countries.

He felt that again during his last trip to Estonia, when he saw – or perhaps experienced would be a better word - the acclaimed Song Festival. "It was simply stunning," he recalls. "There is something incredibly powerful and moving in hearing 26,000 people singing in unison."

Having worked closely for the last couple of years with the authors of "Singing Revolution" – a documentary on how freedom in Baltic countries was regained with the help of songs (Jürvetson was one of the executive producers and financiers of the film) - he imagined the power of singing. But seeing it live made a tremendous impression, as did watching Estonians marching to the Song Field. "It was remarkable how many different micro-cultures could preserve their individual identity through dress and song," he still marvels. "Each township seems to have its own folk dress! I hadn't quite appreciated how diverse the country really is, despite its small size. And then the unity while singing! Those two things – the rich diversity and unity - were really striking."

## ANDRUS VIIRG

Director of Enterprise Estonia's Silicon Valley Office

Steve is one of the best examples of the 'young and angry men' of the Silicon Valley's famed Sand Hill Road (a.k.a. the Wall Street of Silicon Valley, where most venture capital companies are located). Steve has a nose for great new things for the market, which also means profit. Of course, his crush on Estonia is more like a romantic feeling for his roots. But I cannot deny that his eagerness for all-things-Estonian has helped us get on the map in the Silicon Valley. His advice on how to go global and how to recognize what the market desires has been very valuable.

## **TÕNU JÜRVETSON**

Steve's father

My great-grandfather's brother was Konstantin Päts, Estonia's first president, before the Soviet occupation. And my grandfather on my father's side, Aleksander Jürvetson, was at the helm of the printing presses that produced, in February 1918, the Estonian Declaration of Independence ("Manifest kõigile Eestimaa rahvastele"). These chapters of our family history have always interested Steve.

## TIIU JÜRVETSON

Steve's mother

During last summer's Song Festival, the president and foreign minister of Estonia organized a gathering of notable Estonians who had arrived in their fatherland. Steve was invited to speak. I was truly surprised how much he thinks and worries about Estonia's development, how he wants to encourage young Estonians to think boldly and innovatively. That is the perspective from which he is looking at Estonia.

### Forbes/Wolfe Emerging Tech Report February 2009:

There aren't many investors as sharp, quick or multidisciplinary as Steve Jurvetson, managing director of Draper Fisher Jurvetson. His firm is a leading venture capital firm with affiliate offices around the world and one of the most active energy and clean-tech investors.

## Finnish magazine Bisnes.fi:

Steve Jürvetson has become one of the most sought-after venture capitalists and investment gurus in Silicon Valley, Estonia's gift to Internet companies.

## STEVE'S BIO:

Steve Jürvetson is the Managing Director of Draper Fisher Jurvetson, a leading venture capital firm with affiliate offices around the world. He was a founding VC investor in Hotmail, Interwoven and Kana. At Stanford, he finished his Bachelor of Science, Electrical Engineering degree in 2.5 years and graduated first in his class. Steve also holds an MS in Electrical Engineering from Stanford. He received his MBA from the Stanford Business School. He was honored as "The Valley's Sharpest VC" on the cover of the magazine "Business 2.0" and was chosen by the *SF Chronicle* and *SF Examiner* as one of "the ten people expected to have the greatest impact on the Bay Area in the early part of the 21st Century."

Text: Toivo Tänavsuu | Eesti Ekspress

Photos: Aldo Luud,

Kristo Nurmis | Eesti Päevaleht | Hei | Reuters

## Playtech's manager:

We close our doors to many potential customers

**Juha Olavi Korhonen**, the manager of the Estonian division of Playtech, a company which develops gaming software, says that the company chooses its customers very carefully and refuses to do business with many others. The effects of the global crisis cannot be seen anywhere within this business group.



## The financial figures for 2008 of the Playtech Group, an important software development company with a division located in Tartu, were as follows: the turnover was up 70%, and revenue was up 55%. What is the reason behind such a brilliant jump in development?

The reason is organic growth, something that has become entirely customary for us. The renters of our software (licensed online casinos) are doing well: the number of their customers is increasing. Their growth means we grow. Thanks to the Playtech business model, our results do not depend so much on the sales figures for a specific year because we do not sell our software. Instead, we rent it to well-known operators, to those who have enough power and the finances to market their games. In exchange for granting a licence, we earn a certain percentage of their revenue. This means that we need to sell only once and, after that, a long-term flow of funds is guaranteed. We need to make sure that our customers are happy and keep upgrading their software according to their needs.

Our results were also influenced by our acquisition of the software company Tribeca Tables, as a result of which we acquired one of the largest poker customer networks in the world.

## How large is the percentage that Playtech earns from gaming revenues?

This percentage is not made public. If, for example, some big operator were to rent software from us, we would offer them a better deal in relation to their position and brand.

## Any customer who wants to rent software from Playtech needs to have power and finances in place. What does this mean?

We hand-select our customers. Let's look at the brand name Hard Rock Café, for example. Any operator who wishes to rent our software must have a well-known name. We simply do not have time for all our potential customers. And it's fantastic!

If the customer is a stable and expanding company whose finances are in order, we can start cooperating with them with more confidence. But there are numerous companies in the world that we would not want to cooperate with at all. And we don't, because online gaming is a sensitive, money-related sphere of business.

## The casino business, especially in its virtual form, is a very dark sphere of business. The server is located in one country, the taxes are received in another country, the customers are in yet another country and nobody knows where the owners are located.

We need to follow the rules and regulations of the London Stock Exchange (Playtech was quoted on the London Stock Exchange's AIM market in 2006). If a customer who is using our software is caught engaging in fraud, we are very likely to stop cooperating with them because we can be very choosy about our customers.



Since our reputation is at stake, we monitor the activities and relationships of our licensees very carefully. However, our products are tools in the hands of our customers, so any liability lies with the customers.

## How many virtual casinos are using the software designed by Playtech?

Since we are a developmental division (the division in Estonia develops software for poker, casino and mobile games), and we do not deal with sales, that is not the most important aspect for us. What is more important for us is the number of people simultaneously playing the games based on any particular piece of software. For instance, in the case of poker, this number can reach 35,000.

Initially, our activities were mainly targeted at the US market but in 2006 the laws in the US were changed, and thanks to this our licensees could no longer continue their activities (transactions between US banks and online-based game environments were banned). After that, we started focusing mostly on Europe and Asia.

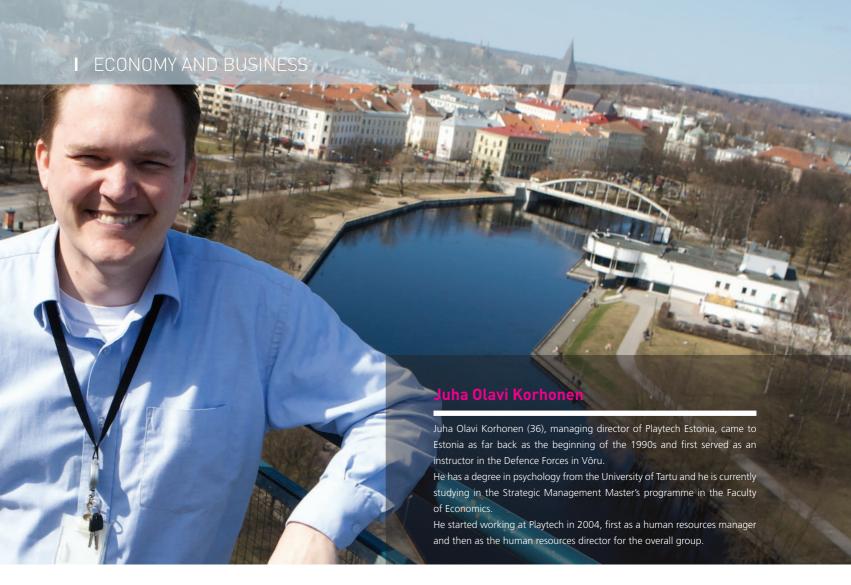
## What is the most important aspect of gaming software as a product?

We believe the design and functionality of our products to be better than those of our competitors. Each of our customers receives a visually unique product and we allow them to participate actively in the creation of the gaming environment. Many companies claim to be orientated towards their customers, but we actually are orientated towards our customers. After all, the customer knows best how to market their games.

Players need to be able to identify with the visual image of the game. We have created games with hundreds of different designs by buying the rights that are required to achieve this. For example, just recently we reached an agreement which granted us the right to use the cartoon character called the Incredible Hulk. We have also created a game based on the theme of the film *Gladiator*.

Appearance is not the only important criterion for the player. What is also important is how much of the money that the player pays out can be earned back by them.

Another strong advantage is our reliability. The software which was designed by Playtech has a logically sound structure.



We have also reduced risks: our games cannot be played in Estonia. This rules out the possibility that the games which we ourselves produce can be played by us, also ruling out the possibility of us winning large sums of money.

## What are the components of a software product designed by Playtech?

You know, I am not even going to try to answer that question. I am a psychologist and an officer by profession and neither of these positions qualify me to be able to describe the minute details of software.

Our software combines a strong multimedia component which is visible to the customer and a background system which is visible to the operator. These two components are linked through a reliable banking service, which we have also created ourselves.

### Who do you regard as your competitors?

There are dozens of service providers. But there are only a few that we would consider to be our true competitors: MicroGaming, PartyGaming, Boss Media and Cryptologic.

## What kind of an influence is the global financial and economic crisis having on Playtech?

At Playtech there are no signs that things will be getting worse, or that they have already become worse. We are very careful, and keep a constant eye

on our regular expenses, making sure that they do not get too high. But there has been no visible decrease in how much the games are being played. Quite the contrary, we are witnessing a high level of growth because more and more physical casinos are moving onto the Internet.

An average end-customer using our bingo game, for instance, is an elderly housewife who plays as a way to spend her time. The Playtech product portfolio includes both bingo and casino games. Both can be played by making small bets - less than one dollar, for instance. The programmes have been adjusted so that if you bet a hundred dollars you will get 97 dollars back. Thanks to this it would take quite a lot of money to be able to lose a large sum

You can play for longer if you are online. In physical casinos that are often visited when people are drunk and where a kind of "social pressure" can be felt, people are more likely to lose a lot more money.

## What does the market and the livelihood of Playtech depend on?

I would link it to the changes in the way people think. People want to do more and more things without leaving their homes. A lot depends on how much the Internet is becoming available. For example, the market in China is immense but there are currently not that many Internet users in the country in terms of a proportion of the population.

The more widely the Internet becomes available, the more people will start living virtual "lives" and the more they will start playing at home. No longer

# Concerning the state of the Playtech Group, the from Africa.

do people need to leave their homes to entertain themselves and enjoy new experiences.

## How much are politics and the banning of games business risks for Playtech?

What happened in the US in 2006 was a very illustrative example. Instead of increasing regulation and earning tax revenue, the business activities of online casinos were banned. And we lost 40% of our income overnight. I cannot imagine a worse "favour" being granted to us!

At the moment, things in the US are moving in a direction where decisions which have been made over the past few years might now be reviewed. What the European countries are doing is trying to standardise the regulations concerning online games.

## How many large countries are there in which you are unable to offer your software?

To be honest, it is more the availability of the Internet that is blocking our activities. For example, we consider China to be the next great market for us. In Asia, people prefer completely different types of games from people in Europe. Instead of poker, people are keener on playing mah-jong, which Playtech has been developing for the past few years.

## Estonia is being talked about as a potential export country for IT services. Do you believe that?

Estonia will never conquer the market in terms of volume. As soon as a business becomes successful, it starts requiring various resources that Estonia lacks. Even Playtech and Skype - both very successful - are unable to find as many people as they need.

Estonia should instead be a centre of ideas, competence and innovation. In such a case, Estonia would be able to provide the ideas and other counties could put them to use.

In the Playtech Academy, we provide training for programmers whose university education is too broad-based. In order to do so, we invite highly professional foreign specialists to Estonia to teach the courses.

Playtech Estonia, with its 800 employees, is a part of the Playtech Group, the roots of which are in Israel and Estonia. The group has five production and development centres around the world, of which Playtech Estonia, located in Tartu and Tallinn, is the largest. In Bulgaria, the company is developing bingo. In India it is developing mah-jong and a mass production unit has been set up in the Philippines, while Israel is responsible for maintaining customer relations and conducting marketing activities. Videobet, which is focused on developing software for slot machines, belongs to the Playtech Group as well. All of the Playtech products - online casino, iPoker, bingo, mah-jong, mobile games etc. - work on a uniform service platform.

In 2008 the Playtech Group earned 40.7 million euros (637 million Estonian kroons) from its 111.5 million euros (1.7 billion Estonian kroons) of turnove In just one year, the company turnover increased by 70% and company profits went up by 55%.

The majority of the company's sales come from poker and casino software which is the speciality of the division located in Tartu, and last year the sale of such software increased by 73% ar 68% respectively. Playtech owns one of the world's largest poker networks, called iPoker, and at peak times this unites up to 30,000 players.

Last year, fifteen new operators were added to the Playtech customer portfolio. A total of 80% of the company's

One of the newest branches of the company's business is bingo software. The goal is to create "the atmosphere of a real bingo hall", something that will be as authentic as possible, and which is supported by a chat system that has many different features. The average number of bingo players will approach 3,000. Playtech's bingo software was selected as the best of its kind in 2009

Playtech has signed contracts with various film companies. For example, the contract signed with Marvel grants Playtech the rights to use the characters from such motion pictures as The Incredible Hulk, Fantastic Four, X-Men and others in its games. From the productions by Paramount, heroes such as those from Gladiator and The Untouchables

han 300 people. The company also has a development team consisting of 25 people, which is located in Tallinn. This year, dozens of new people will be hadded to the Estonian team. The Estonian division of Playtech, as it is known today, was established in 2000 by Rain Kivisik, who became a rue multi-millionaire when Playtech was isted on the Stock Exchange in 2006. The still works at the company, but is uch a modest person that he tends to avoid any media attention and until very

Text: Mari Sarv | Eesti Päevaleht | Hei Photos: ICT Demo Centre,

Marko Mumm I Eesti Päevaleht I Hei

## IT innovation in its entirety comes to Ülemiste

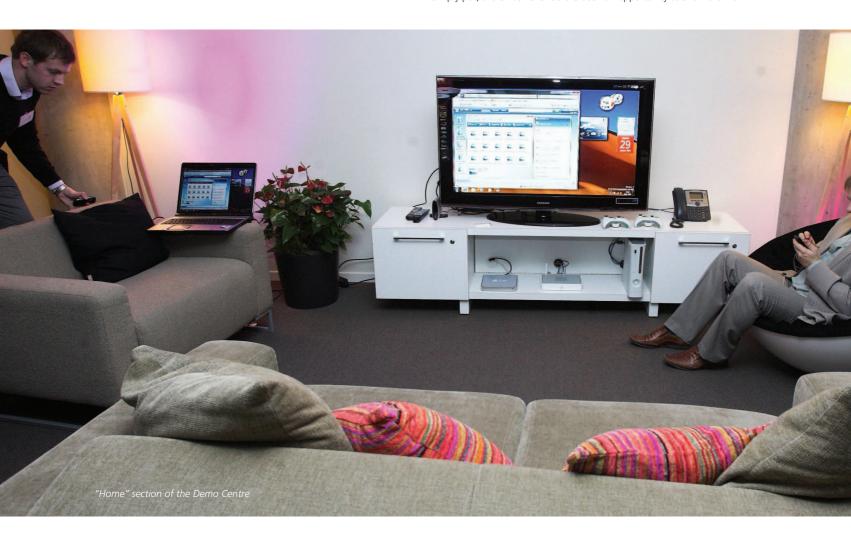
On 29 January 2009, an unprecedented hall was opened in Ülemiste City: a Demo Centre, in which various companies have assembled and integrated Estonia's most important information technology achievements.

In the completed Demo Centre, potential clients can see what opportunities they are offered. They see opportunities in the form of actual products, by hitting a button or logging in somewhere with a mobile phone, and not in PowerPoint slides over coffee and biscuits. The non-profit association, ICT Demo Centre, which was responsible for building the demonstration hall, has three big objectives: co-operation, innovation and exports.

Co-operation is being emphasised because it is the first time in Estonia that companies in the same field - in other words, competitors - have done something like this together. Now, they learn how to market their products together and to co-operate more.

Innovation refers to the fact that novel solutions are being assembled here. Something to show with pride to foreign delegations or potential clients of the Baltic region's IT companies: showing that such things exist and that we have made them.

Exports, of course, means that the demonstration hall could help expand the export index of the Estonian IT sector from five per cent to a significantly larger figure. On display are the knowledge, products and services for sale. Simply put, there has never before been an opportunity to show them all.



## From TestSite Estonia to Ülemiste's wonder room

"IT companies have long wanted to do something together," MicroLink's Chairman of the Board Enn Saar says with assurance, while recalling the history of the demonstration hall idea. The specific idea to bring Estonia together into a location in which technology companies from all over the world could come to test their solutions came about six years ago, but the idea can no longer be applied in such a form. "Large companies test their products with beta versions, which are aimed directly at users. Users are accustomed to testing software that they want to use and some of them even wait specifically for a beta release," Saar adds, justifying the expiration of the TestSite Estonia plan.

But the ideas had already been in the air. In addition to the desire for cooperation, it occurred to the producers, while hosting foreign delegations and travelling themselves, that even though the image of Estonia is that of an e-country, and its level of information technology in the world is highly regarded, the sales work on Estonia's products is modest, and often there is no marketing at all. "A good example is that when foreign visitors come they are often shown the solution of the ID card. This is done as follows: a wallet is taken from a jacket pocket and the ID card is shown to guests. Being polite, the guests nod and say how wonderful it is for you to have such a brilliant ID card! The man in the street who has not come across our ID card does not know what it can be used for. We reached the conclusion that we would not achieve anything in product-service exports unless we managed

to bring companies together, and learned together. That is, a co-marketing project," Saar says.

The demonstration hall idea began to take shape properly after the prime minister's visit to Turkey, when an information and communications technology sample room, which was equipped with Skype, an ID card solution, and a few more e-wonders from St Mary's Land (*The name St Mary's Land (Maarjamaa, Terra Mariana*) is used as a synonym of Estonia in poetic or religious contexts) was opened in Ankara at the Estonian Embassy. The idea emerged to assemble the IT innovations for all of Estonia in one room.

As a matter of fact, there are similar product presentation corners in the offices of various companies, but these are small and include only the products of that particular company. If one technology company offers its niche products in its office and another does the same for their own products in their offices on the other side of the city, no one will know how the products of those two companies work with one another. In the Demo Centre, however, various products can be integrated. And everyone who does something new, whether it is related to software or hardware, can come and test their results. Saar argues the necessity of testing by using a real life example: there are different computers simultaneously in use in offices and homes, and both the network and all the programmes must function in the same way. Likewise, the state's e-services must operate on the computer of each citizen, and it would be nice to be able to use a wireless Internet signal, which is floating around the place anyway, as a way to initialise the house alarm system, for example.



## I FCONOMY AND BUSINESS



Opening of the "Ole Kaasas" (a free-of-charge project to teach computer and Internet usage to the elderly) on the 30th of March 2009



"Forest" section of the Demo Centre



Youth exchange program "Innovation in our Everyday Life:
Traditions meet Innovation" participants visiting the Demo Centre
on the 26th of August 2009.

## At home, at work, and in the woods

The Demo Centre is filled with gadgets which have been brought here by different companies, both companies which were in the Demo Centre from the beginning and those which joined it later.

At one end of the Centre, there is a "home room". There is a TV set mediating digital television and video games, home security and home management systems, and a home computer with its communications opportunities and entertainment.

A bit further from the hall, a mini office with six workplaces will be established in which all kinds of office solutions can be presented.

There is a street by the wall: a barrier that is opened with a mobile phone, mobile parking, an M-news stand, and an ID ticket system, all that we can do with information technology means between the home and the office. Next to this city street full of technology, there is an area that might be considered "at grandmother's": on the whole, communications opportunities are presented in the "forest" sector - Mobile-ID, 3G and similar items - to show that affairs can also be arranged while one is away from the trappings of civilisation. Only the means of communication itself and an electricity supply are required.

Also, state and local government services play an important role - e-elections, the e-Tax Board and all kinds of e-services offered by the state for which you do not even have to open your front door. They are presented both from the viewpoint of the citizen and the state: for example, e-elections are not only

convenient for the citizen, but the state saves a lot of money and time in the maintenance of polling sites and the counting of votes.

The e-school, on the other hand, is a separate exhibit showing opportunities for parents, children and teachers, and covering all the issues connected with the Tiger Leap programme.

Obviously, it is clear that this is not a museum hall, with the prime minister's ID card under glass with a laptop with ID card reader next to it, accompanied by a letter of the wonders you could achieve with that set-up. Not at all. Instead, all of it functions and all of it can be tested. For those interested in getting a more visual experience of the Demo Centre, a virtual showroom can be visited at **www.demoestonia.eu** where you can take a walk through the household, work and forest environments.

Enn Saar also reveals the most courageous demonstration plan: a small acting group will "inhabit" the hall, presenting everything there, although clearly not from morning until night, or even daily. Such an attractive (and expensive!) demonstration is feasible only in the case of more important and well-attended visits. "It is not impossible, however, to train a small acting group from the company's own skilled workers," Saar states.

But there are more opportunities available: everything that can be demonstrated by video recordings or by the person introducing the hall who performs in the "exhibited" situations. Or just inform visitors how each item functions. A demonstration could be based on what a visitor is most interested in. "In order to play out all the opportunities, it would take approximately 24 hours," Enn Saar claims. It is no use spending a half an hour in the home

## **EXPO 2010**

Member of the Board of the Demo Centre Rain Laane says the Demo Centre wants to introduce Estonian IT-solutions outside of Estonia and increase export of these solutions. "One of the largest upcoming projects is that the Demo Centre will be present at EXPO 2010. We will go there with at least six popular IT solutions which have been developed in Estonia. Among these will be the e-School, the ID-ticket, entrepreneur portals and the mobile-ID," says Laane. Currently a recruitment process is going on, during which the Demo Centre is looking for people to introduce Estonian solutions at EXPO 2010.



security section if the visitor is interested in the e-school section instead.

Saar asserts that demonstration opportunities are one of the issues to be dealt with seriously. "Most Estonian companies, either in IT or engineering, have their sales materials on paper. Such a message tends to get lost in the folders of possible clients. During their trips, they receive dozens or even hundreds of such papers from various companies. The probability that they will be able to find us among all those sheets of paper is small. How can we distinguish ourselves from others? We have an opportunity to be remembered and we have to use it, whether at foreign fairs or while hosting foreign delegations. We have to be able to make them remember us both as a country and as a company," Enn Saar states firmly, fiercely determined that the significance of 'wow' marketing be noticed. The product may be good, but if the client does not see it, he will not buy it.

## **Business makes business**

The products of a dozen companies, which now lend the demonstration hall integrity, are not all that there is to this story. Hopefully, the hall will never be finished - at any time companies which are already participating could turn up with a fresh product and install it here, or a brand new company could request a slot and display something excitingly different. Neither the list of participants nor the list of exhibits is fixed.

There are two conditions for the participant: first, it is a place for cooperation not competition. Secondly, all of the products must be made available and must be capable of being integrated with other exhibitors if possible. If Elion displays a TV set to present its digital television services, others must



EU ministers at the Demo Centre on the 28th of April 2009.

be able to use it to show their clips, or as a part of some solution. If Santa Monica sets up a wireless Internet connection, the other exhibitors must be able to use it in their solutions. In this way, the hall becomes analogous to a huge Lego set. And just as someone can use the parts of a Lego dustbin lorry and a Lego dumper to assemble a Lego multi-lift car, so it must be possible for the various pieces in the demo hall to be clicked together to form a functioning whole. Something that can't be excluded here is the chance that new solutions might appear from the solutions assembled.

That, of course, means cooperation that would not happen if each expert stayed with his colleagues at the office. Saar praises the way the experts of various companies were forced to communicate with one another when setting up the hall and installing their technology. New connections were formed from this, as well as new friendships and new cooperation projects. "Someone wants to build something onto the Elion television and is forced to agree upon one or two things with the Elion guys. Two Product Managers now know each other and it is easier to move on with new ideas. The importance of that effect is hard to measure, but even harder not to notice," Saar says as an appraisal of the way the project is oriented towards cooperation. "If something is successfully launched, it provides the parties with a success experience and they know that by cooperating they manage to get something achieved. Later on, it will be easier to create actual business projects out of this early cooperation."

By the time of writing this article, over 1,500 visitors had explored the possibilities of the Demo Centre, and of these about 600 were from outside Estonia. Feedback from the visitors has been overwhelmingly positive, especially among younger people. The Foreign Ministry of Estonia has also brought several delegations to the Demo Centre and, as feedback from these groups has been great, the Ministry will continue to bring delegations in the future. During the last few months, two new partners have joined the Demo Centre – NASDAQ OMX Tallinn and Scalewireless. Other companies, both big and small, have shown interest in joining the 29 organisations and companies already present at the centre.

## Urmas Kõlli

President of ITL (the Estonian Association of Information Technology and Telecommunications) and chairman of the board of AS Datel

While working in the domestic market, most ICT companies have managed on their own, but cooperation is needed more than ever to work on external markets. Whether we like it or not, in order to operate in export markets, even at very modest levels, Estonian companies are too small, poorly focused, and have resources which are too meagre. Here, "cooperation", "a division of tasks", "specialisation", and "dedication" are the magic words

that can positively affect the capability of the sector's companies.

In AS Datel, one of the founders of the non-profit association called ICT Demo Centre, we have come to believe that, even though we have lots of interesting and useful solutions, our opportunities to introduce and demonstrate all of them are pretty limited. Furthermore, often the advantages of the systems we have created are far more vividly displayed when they are used in conjunction with other associated systems. Up until now, the organisation of such joint demonstrations involving several systems has been quite a complicated and often puzzling process. As a result, the producers of such systems have suffered, but often our potential clients have suffered even more. It was simply impossible to explain the effect of integration to them. By creating the Demo Centre, we have paid a lot of attention precisely to such aspects and to the "boost" which follows as a result of a process of cooperation.

For a long time, the Estonian Association of Information Technology and Telecommunications has supported the idea of cooperation for companies, and has tried to promote it in any way possible, helping to find ways to channel similar interests to more specific joint activities. Finally, such efforts have proven to be fruitful. True, at first cooperation was launched not in production, but in marketing. But I believe that after the first steps have been taken, the process will greatly open up to the benefit of all.

## **Andre Veskimeister**

Chairman of the Board of Ülemiste City AS

We were present at the birth of the IT Demo Centre idea, one of the most remarkable achievements of Ülemiste City, where IT companies situated nearby have made actual and substantial efforts at cooperation in the export development for the field and for the entire country.

Very many delegations from various other countries visit Ülemiste City, and the IT Demo Centre is the best opportunity to show potential partners actual IT solutions created in Estonia. It creates a completely different situation when you can talk about the Estonian ID card by showing the actual applications for its use, for example.

Primarily, we expect an opportunity to assist the export development of knowledge-intensive business, and we also consider it to be very important to further develop actual cooperation between Estonian IT companies in international tenders and their participation in export markets.

## Triin Sepp

Member of the Board of AS Datel

We became part of the Demo Centre at the moment the idea was born. It was a result of discussions between Urmas Köll, Enn Saar, Vaho Klaamann and Rain Laane on how the Estonian IT export market could make a significant breakthrough. It is amazing that these men did not let the idea sit idle in a drawer, but started implementing it vigorously.

Datel is able to showcase its various software solutions to various new markets, primarily the national GIS-framework X-GIS, which gives all the interested parties the magnificent opportunity to satisfy their GIS needs on the basis of high quality national data. Also, Datel owes a great deal to the Public

Procurement Registry, which has been a great help in making the public procurement process more effective and has increased its transparency, as well as creating other solutions. We have also expanded on the entire multimedia solution for the Demo Centre.

We create good cooperation opportunities between companies by offering various solutions to them. Our solutions are also mostly integrated into systems which are created by other companies. The true quality and innovation value of the entire solution often become apparent while standing back to look at the big picture. We also hope that, in the future, when demonstration and test bases are available in the Centre for all the state systems, the Centre can be used as an extensive test site.

So far, the construction costs of the Demo Centre have eaten up considerable resources, but we continue to contribute to the investment it requires, and we expect other companies and the state to come along with their own magnificent ideas for making the Centre even more attractive.

Primarily, we hope the Demo Centre will be a source of additional support for our export breakthroughs and will motivate companies operating within the Estonian IT landscape to cooperate more and more.

## Maidu Harjak

Business Manager of Sun Microsystems Estonia

We came to participate at the Centre in March 2008, when we visited the Executive Briefing Centre for Sun Microsystems, and the factory in Linlithgow in Scotland. They discussed in detail the Sun Solution Centre programme and that connected pretty well with Microlink's plans to create a Demo Centre in the new office.

For the first stage, we plan to display the virtualisation solution for the Sun-Ray workplace in cooperation with Microlink. SunRay is a serious alternative to the traditional use of personal computers and terminals based on Windows. It is especially useful when you wish to decrease energy consumption in the workplace, save procurement and administration costs and, at the same time, increase mobility. But, of course, these will not be the only solutions which comes to light. Actually, through the Demo Centre we are able to highlight the entire product range of Sun Solution Centre's s (SSC) Sun Microsystems.

As the Demo Centre is connected to the worldwide SSC network, the solutions used in all Centres can be seen and tested. Furthermore - pursuant to the client's wish - it becomes possible to build a highly necessary test environment in any other Centre and test it over the Internet. This is the biggest advantage for us with the Demo Centre.

Certainly, the Centre will help to introduce opportunities for use of Sun Microsystems' free software with open initial codes, such as Solaris, Java, MySQL and OpenOffice, for people living on both sides of the border. Also, it will provide a good opportunity for Estonian enterprises to more easily check the feasibility and operability of new ideas on site, with the help of a "proof of concept" by including for that purpose the know-how of Sun Microsystems and resources from all over the world.

From the point of view of participation, we primarily expect an increasing interest in the innovative technologies of Sun Microsystems, which are already used in the solutions for the Demo Centre, and attention to those new

products that might encourage both visitors and other participants to create new solutions.

#### Kaja Karlson

Business Development Manager at Scalewireless

We joined the Demo Centre in July 2009. The idea to join came when we ourselves visited the Centre with our foreign partners to show them what the Estonian ICT sector is about. After receiving an invitation from the Demo Centre project manager to join them, we took the necessary steps and have been members now for roughly two months.

Innovation and special solutions come as a pleasant surprise to many of our partners who visit Estonia, and the Demo Centre gives a great overview of IT sector development in Estonia, both on the individual and national levels.

Scalewireless displays several different solutions in the Demo Centre, such as small servers which are suitable for multi-media solutions and security systems. We also display VoIP and IP-TV solutions and an Outdoor Access Point at the Demo Centre, the latter making it possible to transmit Internet over long distances with high quality. The key concepts which characterize our solutions are innovativeness, modern developing technology, simplicity and quality. Our goal at the Demo Centre is to share information and present communications technologies which can be tried out by everyone.

During our visits and presentations we have gotten a lot of positive feedback for our innovative and unique approaches to both software and hardware developments. The Demo Centre is a great opportunity to keep in touch with the activities of IT professionals and increases co-operation of companies working in the same area. In the future we hope to see joint projects and export strategies put in place.

Being a member of the Demo Centre has given us a lot of positive feelings toward the Centre, and has provided an opportunity to be seen. In addition to emotional benefits, being a member has had real business value for us as well. Most people visiting the Centre are professionals from their respective fields, who realise quite quickly what the benefits and uses for specific client segments are. It will probably take some time to reach a state of mutual exports, but I'm sure we'll reach it eventually. We will certainly continue to support the Demo Centre in order to increase the image of Estonia as a growing IT country.

#### Lilian Viirma

Head of Public Relations of Elion Ettevõtted AS

In the Demo Centre, Elion is able to present two innovative services based on IP platforms (Internet Protocol): an Internet phone and a digital television that is unique in Estonia. The DigiTV environment has been developed entirely by Elion, as has the added value services provided by the Internet phone. For Elion, a significant advantage of that project is its timing: the Demo Centre has started work just as we are now bringing to the market two very innovative additional services. One of them is a recording digibox with which it will be possible to watch television with a time shift. The other one is a personal television, which will make it possible to change the user-focused TV watching experience and make it possible to use various interactive communication opportunities.

The Demo Centre creates an opportunity for the exchange of ideas and information, out of which interesting cooperation projects can be created. As Elion's DigiTV is really a worldwide pioneering solution, we are definitely prepared to share our experience with anyone from anywhere in the world who shows a potential interest.





The Estonian company Yoga Ltd has created the world's first self-learning intelligent building control system – Yoga Intelligent Building (Yoga IB). As a holistic system, it guarantees the functioning of a building's climate, lighting, access and security systems, and makes remote meter readings possible as well.

The Yoga system functions in real time and is available through a touch panel, a computer with an Internet connection or through a mobile phone. This means that as soon as something happens at home or office you can find out about it in real time.

Yoga Intelligent Building System is meant for residential homes and apartments, business offices, factories, logistics warehouses and many other places.

The history of the company dates back to 1999, when Priit Vimberg began to install mobile phone payment controllers inside coffee machines in cooperation with the local phone company EMT. This marked the beginning of collaboration with Raivo Raestik, an employee of EMT at the time. They worked well together and their ambition and shared desire to accomplish something big has led to the installation of the Yoga IB system as the first commercial installation in the Tammsaare Business Centre (23,000 sq m) at the end of 2008.

Now that Yoga Ltd has demonstrated that its product and concept work well in commercial buildings, the company is taking the next steps to move into foreign markets. To this end, the first product development was completed at the end of September and the first contracts have been signed in the United Arab Emirates and India, where many property developments are looming. If the test installation proves a success, the doors will be opened to large property projects in 2010, with 45 skyscraper developments as potential objects.

In addition to the Arab world, Yoga is breaking into the US market, having begun negotiations with the city of San Jose, which has the goal of constructing 5 million square metres of energy efficient, green buildings by the year 2022. Yoga is well-suited for such projects, due to offering a holistic solution, where all of the buildings of a town can be linked into the same system.

#### What makes Yoga IB so special?

#### **Artificial neural network**

The main competitive edge of Yoga IB is its self-learning climate control system based on neural network technology. As the system can be installed fast, does not require very qualified labour to do so and there is no need to fine-tune it later, it ensures direct savings for property developers and in terms of maintenance.

Whereas with traditional automated building management systems each room has a local thermostat which needs to be adjusted based on the specific data of each room separately, the YOGA IB self-learning neural network-based climate system does not need to install the data of each room separately. The neural network learns based on past behavior and information of the present status and consequently predicts the room's needs for the near future, releasing commands regarding heating, ventilation and so on. Predicting the near future on the basis of past data guarantees a more stable and optimal interior climate, ruling out the possibility of over- or underheating and -cooling.

This explains the technological advantage that the algorithm of the self-learning artificial neural network provides in comparison with the PID algorithm, which is, *de facto*, a standard feature in automated systems today. In addition to its stability and self-learning ability, the neural network is able to choose between various energy sources based on price and efficiency. For example, the neural network is able to learn that at night it is more beneficial to cool the room by ventilating it with cool night air instead of using an electricity-based cooling applicati

Thanks to the existence of a thorough and flexible legal system, Yoga IB has been built as a holistic system, making it possible to use the information coming from each separate part of the system in the management of the other parts. For example, the information about a person's presence can be received from the sensors of the security system and the card readers of the access system and, in turn, this information can be used to adjust the sustainable and personalized features of the climate and lighting systems. This means double savings, as it eliminates the need for the installation of an additional presence sensor, cabling and system set-up. In a similar vein, the security and access systems give information on who is using the room and, therefore, the system can automatically take into account that person's desired set-up (for example room temperature, lighting, moisture and sound).

#### Remote access

In its standard function, the web browser-based user interface access of Yoga IB guarantees the opportunity for the management and monitoring of buildings from any part of the world and from different mobile appliances, which competing systems, as a rule, do not offer as a standard feature.









#### Well-suited for different buildings

Whereas traditional automated building systems are divided into residential and business systems, Yoga IB is suited for any kind of building. This offers an advantage, as real-estate owners who own different types of buildings and the installer can manage all their buildings within one system, thus having no need to own or get acquainted with several systems. Using a unified system is also beneficial for re-sellers, as it reduces the costs of storage inventory and of training sales personnel because there is no need to learn about different systems being supplied to buildings and there is a significant decrease in storage inventory.

#### Legal system allows for a holistic approach

Traditional industrial and home automated systems function anonymously and without being personalized. Therefore it is not possible to build a system in a business building which would enable the tenant and the staff to have access to managing the control system and to make simple modifications to it. This narrows down the opportunities of large producers, as they are forced to integrate their automated systems with separate security and access systems with differentiating system architecture. This is what usually happens, leading to four times higher expenses in comparison to the cost of Yoga IB.

#### Totally encrypted

The interconnections between the components of existing automated systems are not encrypted. In order to be secure, the management of buildings which are situated in different geographical locations requires the encryption of all communication channels, from user interfaces to modules. Through such encryption, it is possible to press a button in a building located in Tallinn and open or close the entrance to a building in New York, and in no part of the system does data move without being encrypted. Such a solution is especially important for such large corporations as banks and international real estate and security companies.

#### **Ambitious plans**

Priit Vimberg and Raivo Raestik are optimists, with the goal of making Yoga Ltd an enterprise worth billions. The company is in a better position than ever before, and the foreseeable end to the world economic decline and activities in the sector of energy efficiency—said to be the growth engine of the world economy for the next twenty years—provides them with all the prerequisites. In order to make this growth happen, they have begun to actively look for additional investments and partners who can help the company break into different markets around the world. If all goes according to plan, Yoga should be listed on the stock exchange in 2015.

#### What do Estonians do online?

A brief overview of theregular use of internet applications (%) among the Estonian population between the ages of 15-74, September 2008:

E-post 58%

Internet bank 55%

Search engines (neti.ee, Google, etc.) 43% News portal delfi.ee / rus.delfi.ee 39%

Online issues of newspapers/magazines 35%

MSN or Windows Messenger 32%

Internet based state services (e.g. tax declarations) 31%

Weather portals 30%

Text: **Toivo Tänavsuu** I Eesti Ekspress Photos: **Peeter Langovits** I Scanpix

# Estonia will have broadband Internet coverage by 2015



What a coincidence: Estonian telecom companies declared joint efforts to provide the whole country with fast broadband Internet access by 2015 and the next day, the telecom giant Ericsson announced that it will develop a mobile networks factory in Estonia of key importance for the whole region.

The recently established Estonian Broadband Development Foundation has among its founders a whole army of Estonian telecom companies, members of the Estonian Association of Information Technology and Telecommunications, including the larger mobile operators EMT, Elisa and Tele2, in addition to Elion, Ericsson Eesti and others. A joint action plan has been created in order to develop the infrastructure of a modern information society in Estonia by 2015, which will help develop enterprise and improve the quality of life primarily in rural areas.

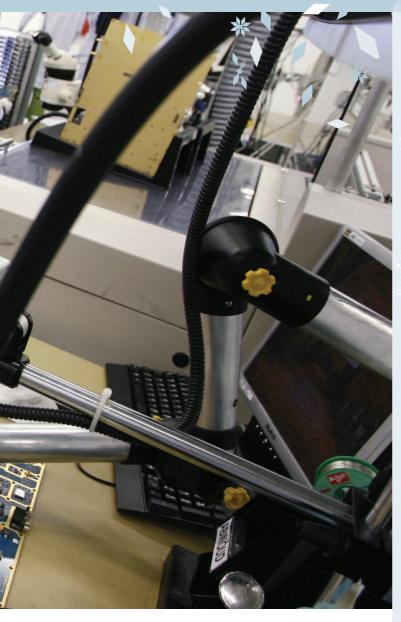
"The need for rapid broadband connections is growing all the time. Services such as e-learning, e-health, e-state or digital television, for example, need connections with increasingly higher data transfer rates," explains Chairman of the Estonian Broadband Development Foundation Olev Harjo. "In order for the enterprises and residents of rural regions to benefit from the advantages of the information society, the new generation broadband must

reach every corner of Estonia. We cannot afford to create a wider digital gap between the countryside and the city."

# The Estonian Broadband Development Foundation to develop high-speed Internet

The action plan, called EstWIN, foresees linking up every Estonian household and office with new fibre-optic connections which have a speed of at least 100Mbit/s. This is estimated to cost between five and six billion Estonian kroons. The state's organisational input is very significant in this process. The costs, to a large extent, will be covered by the companies themselves, with a quarter of the funds being applied for from EU funds.

The telecom companies offer a fairly obvious argument for the process. The state would be an outsider if it did not have highways. In the same way, it will be an outsider without the "highway of information". Firstly, it is predicted that Internet data volumes will grow by 50 per cent each year in the next few years. The copper network cables in use today will not be able to physically handle this load. Secondly, the spread of the Internet promotes economic growth. World Bank and European Union research shows that



a 10 per cent growth in the usage of broadband will yield 1.21 per cent growth in GDP per capita. The impact of broadband on the growth of productivity is over 50 per cent. According to a research project carried out in the United States, the investment of each 15,000 euros per annum in broadband infrastructure leads to the creation of one job or the preservation of one job per year. Thirdly, Estonia wishes to remain internationally competitive. A proper infrastructure offers a competitive edge in attracting foreign investment. Developed countries invest hundreds of millions of euros and dollars in the development of next generation broadband. It is a race of sorts. In some ways, Estonia is a leader, but in other ways a follower, depending on which country the comparison is made with.

For example, in Lithuania the state will build 8,500 kilometres of fibre-optic cables in two stages. This guarantees access to next generation broadband to 98 per cent of the population. Finland has a broadband strategy with the aim of providing new high-speed Internet to all inhabitants by 2015 and the state is investing 200 million euros in the project. Sweden has commenced

# Estonians take broadband to fighter planes and trains

Estonians do not just actively use communication technologies; they also come up with their own revolutionary solutions. Modesat, the portfolio company of Ambient Sound Investments (the investment group of the founders of Skype) was the first in the world to solve the challenge of delivering broadband on a plane moving at a speed of 1,200 kilometres an hour.

Modesat is one of the most ambitious technology companies in Estonia: it patented the effective PilotSync radio communications solution and is breaking into foreign markets with the product.

PilotSync is a revolutionary solution which synchronises the radio channel which makes the communication channel more effective and secure to use. It offers higher data rates and efficiency. In addition, it also comes at a cheaper cost

Rain, snowfall or falling leaves can disrupt mobile coverage in Estonia, as signals can dissipate, reflect or be disturbed in some other way. However, those problems do not affect communications based on Modesat technology.

"At a time when people are increasingly mobile and want to be online 24/7, the data rate and efficiency of communications channels are becoming ever more important," says Põldsamm.

Modesat's main markets are telecom markets. There are 1.2 million radio links sold every year throughout the world and this is growing by 20-30 per cent a year. A large share of the 3G and 4G mobile operators must thoroughly upgrade their networks in the next two to three years, in order to be able to offer broadband.

The trend of mobile phones as the main multi-medium, with the computer and permanent home Internet connections exchanged for mobile Internet, is predicted everywhere. This assumes the

working quality of and increase in the data rate of the networks.

Modesat is also interested in the field of satellite connections – broadband in fast moving objects such as aeroplanes, boats etc. – and in the military field, where there is demand for technologies which work in difficult connections, for example for secret communications

Where many have failed, Modesat can confirm that they have the technological solution to transfer television signals to a very rapidly moving terminal, for example a passenger plane moving at a speed of 1,200 kilometres per hour, not to mention a train which moves at a speed of 300 kilometres per hour.

Negotiations are underway with dozens of companies throughout the world, including Italy, China, the USA, Great Britain, Germany, Canada, India and Israel. Many of those are large stock exchange companies. Modesat has not needed to do active sales since spring, as its negotiation partners hold a whopping 85 per cent of the market!

They are targeting the largest possible companies, mainly the producers of cable modems and radio links, for example Huawei, Ericsson, Nokia Siemens Networks, Alcatel-Lucent and many other network appliance producers. Among satellite- and mobile communication producers, there are companies such as ViaSat, iDirect, Boeing and Saab. But these are just some of the potential clients.

In addition to Estonia, the company has representations in Belarus, Russia, Israel and the Silicon Valley in the US. The main research and development work is carried out in Tomsk, Russia and in Gomel, Belarus.

Read more about Estonian technology companies on the innovation blog

www.tiger prises.com

#### I FCONOMY AND BUSINESS



with the project "Ambient Sweden", which aims to make the country a leading Internet country by 2015. On the other side of the world, the Australian government has decided to invest 43 billion AUD in the development of next generation broadband. It is the biggest infrastructure project in Australian history. Singapore has set the goal of having its optic network reach 95 per cent of homes by 2012, with a minimum speed of 100Mbit/s. This involves an investment of 750 million Singapore dollars.

Fourthly, the spread of broadband has an impact on climate change, alleviating the spread of CO2, as well as reducing energy and transport costs. Many things can be done at home.

As in many other countries, there is access to broadband mainly in cities and bigger rural establishments in Estonia. Nearly 70 per cent of the population lives in cities. This means that services such as e-elections, e-tax declarations, Internet banking, digital television and digital signature—all regular customer services which have brought acclaim to Estonia—are only available in larger settlements where quality Internet access is just as normal as electricity. But the situation in the countryside is much worse. Many places have no access at all to fast Internet. This represents a digital gap, according to the telecom companies.

The EstWIN project will be implemented in several stages. By the end of 2012, a fibre-optic base network should be built everywhere in Estonia, totalling 6,640 kilometres of fibre-optic cable, assuming that 98 per cent of households, companies and organisations are nearer than 1.5 kilometres to the base network. In the second stage, communications companies will build network connection points in cooperation with local governments. There will be open competition: it will be a physical base infrastructure which can be rented on equal terms by all communications companies.

This plan corresponds nicely to the fact that, at the end of August, Ericsson opened its factory in Tallinn, and will focus on developing high-tech production, including building appliances for mobile networks and broadband

# Ericsson came to Estonia because of Estonia's competent workforce

According to Jan Wassenius, Vice President of the Ericsson Business Unit Networks, the existence of trained personnel with the appropriate know-how who worked in the former Elcoteq factory became decisive when choosing the location for the investment. In addition, Estonia boasts a very favourable climate for the development of information technology.

A precondition for the opening of the Ericsson factory was a previously signed contract with the former subcontractor Elcoteq, according to which Ericsson will take over most of the production units of Elcoteq Tallinn, together with its 1,200-member staff. Elcoteq has been a subcontractor of Ericcson in Tallinn for a decade already.

"Elcoteq had its own problems and plans; we had our own problems and maps. Elcoteq wanted to consolidate its production somewhere else and we needed to expand. Hence we found a mutually suitable agreement," said Wassenius.

According to the Estonian Minister of Economics and Communications, Juhan Parts, the decision made by Ericsson is noteworthy for several reasons. Firstly, it shows Estonia's competitiveness and, secondly, it sets an example for other Estonian and Scandinavian companies in making investments. Thirdly, it creates wider opportunities for cooperation with Estonian higher education institutions and innovative enterprises.

Ericsson's factory in Tallinn focuses on the production of high-tech equipment. The factory continues to produce appliances for mobile networks for the base stations of Ericsson 2G and 3G, with appliances of the RBS6000 series being the newest product, which supports the technology of GSM/EDGE, WCDMA/HSPA and LTE.

A hundred per cent of the factory's production will be exported, according to Veiko Sepp, Chairman of the Board of Ericsson Eesti. At the opening event of

the factory, the manager of Ericsson's Nordic and Baltic Region, Mikael Bäckström, expressed his wish that, in the future, a growing part of the turnover of the factory will stay in Estonia. "Today many countries are investing in roads, bridges and railways. Estonia is also investing in information highway technology, and this is precisely the kind of technology offered by the new factory," said Bäckström.

Veiko Sepp is certain that some of the network appliances produced in the factory will be used in the Internetisation of Estonia. The role of the factory is to be a regional centre for European production as well. Ericsson also produces network appliances in India, China and Brazil, and there are partner factories in Sweden.

Several important trends can be spotted in mobile communications technology, according to Sepp. Firstly, there has been tremendous growth in the speed of building networks. Secondly, other new technologies are rapidly catching up.

"There are already four billion mobile phone users in the world today. The first billion was reached only in 2001. The kind of growth since then has been beyond anybody's imagination. Mobile phones have become standard consumer items, and without them people cannot live," said Sepp.

Whereas in Estonia and most West European countries the number of SIM cards already exceeds the number of people, many large Asian countries are yet to have their mobile phone boom. India and China are coming online at tremendous speed.

People in many areas have never seen a regular land-line phone and the mobile phone is their first experience of a telephone. Also, in many places in Africa, second generation GSM networks are being built, and they need to cover very large territories.

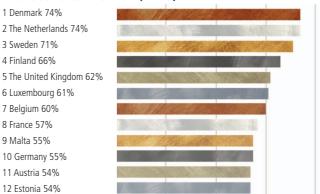
Ericsson is a clear world market leader in the production of mobile communication networks, having a 40 per cent share. However the competition is growing, as the Asian manufacturers Huawei and ZTE are trying to establish themselves in Europe.

Sepp sees significant real benefits in the Estonian broadband strategy. Internet coverage will enable people to work where they want to. "If you are a writer or a financial specialist who does not need to be physically present in an office, you will have a chance to work from a distance and to choose where you live. Things like being close to nature and fresh air will become more available," he says. But perhaps the broadband strategy has an even more important message to promote. Many people say that the development of Estonia as an outstanding e-state has come to a standstill in recent years. In other words, the tiger is asleep and the telecom companies are trying to wake him up.

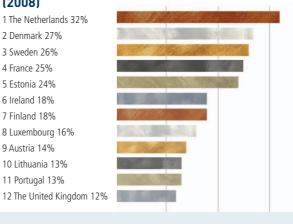
Sepp believes that the tiger is not asleep. Estonians simply have been spoilt and no longer recognise all the innovative services and opportunities available to them which are really considered to be something special by tourists.

Indeed, are there any other states in the world where mobile car parking is as ordinary as buying a newspaper from a kiosk, where income tax declarations are done online in three minutes and where you can also vote in elections online?

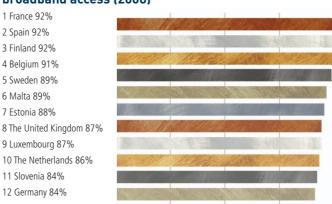
# % of households with a broadband connection (2008)



#### % of population using e-government services for returning filled in formsin the last three months (2008)



# % of enterprises with fixed broadband access (2008)



Source: Eurostat



In the era of the Internet, global cyber crime is spreading like the Plague. No longer is it the hobby of isolated hackers, but a source of income for the mob and a virtual weapon of hostile states. Most worryingly, no one is immune, not Barack Obama, not Bill Gates, not you. At the same time, the enemy remains invisible and hard to convict.

Are you certain that you know what is inside your computer and that you are its owner? Tens of millions of people think so. Nonetheless, there are dangerous viruses lurking around on their computers which serve the interest of someone else, while the so-called computer owners remain blissfully unaware.

The times when gullible computer users were tricked with e-mails about receiving the inheritance of a rich Nigerian uncle or asking to provide their bank details in order to access their sudden lottery windfall are long gone. The attacks of computer hackers have become so complex that they often puzzle computer specialists, let alone your average PC user.

# Your computer may be used to hack into the White House

Anto Veldre, an information protection expert of CERT Estonia, comments on present dangers: "Really, e-criminals do not wish to do harm on the Internet; they just want to get to your wallet. They don't even plan to empty it all at once. As is characteristic of prudent farmers, they can keep you, as their source of income, in the stable for months or years. A contaminated computer is a source of great income: in addition to emptying your bank account, they can use it to send junk e-mail, attack Georgia or hack into the computers of the White House. In addition, they can deposit a modest web form on your computer where taken-in neighbours can enter their bank PINs. An e-mobster can lend his army of 10,000 enslaved computers to a friend to organise A Really Big Scam."

In other words, you don't really have to be dim in order to become a victim. The freshly published, shocking report by one of the leading computer security magazines, *TrendMicro*, reveals a series of threats which everyone should be aware of. The report talks about one of the most professional cyber-criminal gangs around. More specifically, it is a story about a company



in Tartu, in southern Estonia, which manages a huge global cyber-crime network, with its roots possibly in Russia or the United States. The name of this company, in operation since 2005, is Rove Digital and last year its owner Vladimir Tšaštšin was convicted of bank fraud in Estonia.

#### The gang keeps fooling Google and Microsoft

Investigators at Trend Micro, Feike Hacquebord, Ben April and Rainer Link, note in the report that, on the surface, it is a completely ordinary Internet service provider. But, in reality, since 2005, the company has administered and managed one of the most developed networks of websites spreading spy viruses. And they have "kidnapped" many infected computers. The Tartu cyber-criminal gang is very professional and smart; with its illegal activities it has even fooled the security teams of Google, Yahoo and Microsoft.

According to the data available to Trend Micro, the Tartu-based company owns various sub-companies in Europe and the United States, which operate on virus servers. Should one of them be disabled by cyber-defence, as happened in the US in 2008, the activities will soon move to another company elsewhere. According to the report, nearly 100,000 computer users receive spam from the Tartu company every day which says: "You are infected with a virus, please download this piece of free antivirus software."

In reality, the antivirus protection is a virus itself. You read that you will be able to clean up your computer in a few easy steps, whereas in reality you will let a virus in. In a similar way, computer users are tempted with fake updates of the well-known programme Adobe Acrobat.

Every day nearly a million computers which have been contaminated by the company receive unwanted offers and commercials which direct them to

# Scientist: \* "Digital Pearl Harbour" is quite possible

Interview with a leading researcher of the NATO Cyber Defence Center, **Kenneth Geers** 

# Please name one of the main trends in cyber crime in 2009.

A major trend in 2009 is that attackers have shifted from sending a small number of threats to a large number of people to sending many unique threats to a smaller group of Internet users. In other words, cyber targeting has improved.

# What are the most fruitful outcomes of the work done by the NATO Cyber Defence Center to date?

The most visible event was our June 2009 Conference on Cyber Warfare in Tallinn. Researchers from almost twenty countries gathered to explore the relationship between computer security and national security. Not surprisingly, the devil was found in the details: the challenge of attribution, the calculation of damages, the cyber threat to critical infrastructure, law enforcement jurisdiction, and much more. A CCD CoE book, *The Virtual Battlefield: Perspectives on Cyber Warfare*, comprised of the papers presented at the conference, will be out in late September.

# What are the most serious attacks we have seen in 2009?

In January, the entire nation-state of Kyrgyzstan was knocked off-line during a time of political crisis, via distributed denial-of-service (DDoS) attacks against the country's two biggest Internet service providers (ISPs). It is believed that the cyber campaign may have been intended to put pressure on the Kyrgyz government to remove foreign military forces from its territory.

# From where and for what reason were the most serious attacks carried out lately?

One of the most controversial subjects in cyber security, for at least the past decade, has been whether a "digital Pearl Harbour" will happen or is even theoretically possible. In my opinion, devastating cyber attacks on critical infrastructure are possible, especially in coordination with a traditional kinetic attack. In 2007, it was reported that Syrian air defence systems were disabled by a cyber attack moments before the Israeli air force destroyed a suspected Syrian nuclear reactor. If true, that event demonstrates the clear power of cyber attacks, at least indirectly, to inflict damage on national critical infrastructures and could even be called a small–scale Digital Pearl Harbour.

#### Do you have any overall figures on the regularity and amount of different type of attacks?

There is a lot we do not know about the cyber threat, but what we do know is worrying. In July 2009, for example, Symantec reported that 89 per cent of all e-mail messages sent were spam. That means that, despite really focused and well-funded efforts to stop it, the amount of spam we receive every day continues to increase!

#### I FCONOMY AND BUSINESS

pages that have been infected with the virus. For example, on contaminated computers you see a commercial for the potency drug Vimax on the CNN webpage, where there is really an advertising space for a car company.

An extremely cunning way of earning money is by "kidnapping" the search results of Google. If you do a Google search from a contaminated computer, you will receive a list of fake results which looks quite authentic but has been fed to you by criminals. If you click on a link, you reach pages controlled by the company, such as that of the potency drug Vimax.

#### Your computer as a trading object

The US computer security company Finjan describes, in one of its latest reports, how any computer, whether at home or at work, may become a valuable item of trade in the international business of cyber criminals, without the computer owner even realising it. The web environment through which you can buy and sell contaminated computers is called Golden Cash and it is controlled by criminals. The prices of contaminated computers vary from country to country. For example, Golden Cash can buy a thousand contaminated computers in Australia for 100 US dollars, but the price is a mere 5 US dollars in the Far-East. Then it will sell them, making a huge profit.

By buying contaminated computers and homepages, Golden Cash motivates young hackers to commit crimes and to earn money while doing so.

Trend Micro believes that it is possible to catch and prosecute this widespread network of cyber criminals. But this assumes the existence of international cooperation, which is the main point of concern.

The NATO Cyber Defence Center in Tallinn has been busy with a wide analysis of the aspects of this field for just over a year now. Without being directly under the control of NATO, the USA or the Estonian Ministry of Defence, but answering to its own managing body, the think tank has the goal of preparing the best possible network security for NATO countries.

Many of the astonishing findings of the NATO Cyber Defence Center were published in a report in Estonia last year, according to which:

- Cyber criminals enjoy practical impunity in countries such as Russia and China;
- The strategic planning of cyber criminals becomes more and more sophisticated, but governments remain ignorant in terms of dealing with the issue:
- One of the greatest challenges for dealing with the issue of cyber crime is the absence of relevant international law. The law regulating e-commerce is especially insufficient;
- Collecting the digital evidence and managing it in courts is, unfortunately, also inept:
- The number of "spamming zombie-computers" has quadrupled during the last quarter. They are able to send 100 billion spam messages daily;
- E-criminals are among the winners in the global economic recession;
- There are already more than 7,500 websites on the Internet directly under the control of terrorists;
- Cyber criminals will very soon be capable of destroying a country's electrical, water and gas supplies, and Internet banking systems;

#### Black market intertwined with hacking

A leading researcher of the NATO Cyber Defence Center, Kenneth Geers, says that, unfortunately, no computer network is completely protected these

days. There is a growing realisation in criminal circles that cyber attacks can be much more profitable than smuggling, drug trafficking or piracy. The black market and hacking are becoming intertwined ever more tightly, with money being directed from one field into another.

Geers mentions information theft as a growing trend. "As an entrepreneur, you could be investing billions of dollars in your product development. And then your secretary could take the product of years of work, and intellectual property, and walk out the door, never to be seen again. Or there is the possibility that hackers simply steal this information from your database," he says.

According to Geers, cyber attacks are international. Very rarely are they executed on computers located in the same country.

"If I was an American hacker who wanted to attack a bank, I would organise the attack in countries which have poor legal cooperation with the US - for example, in Zimbabwe, North Korea or Turkmenistan. The possibility that I will be discovered, even if I am physically in Washington, is practically nil, as I would hide myself behind the charming anonymity of the Internet," explains Geers.

#### Estonia in the world's first cyber-war

The first ever cyber-war between two states occurred in 2007, when the websites of Estonian public departments and enterprises were subject to attacks that originated in Russia for three weeks. The attacks were on the parliament, ministries, banks, media channels and so on. The Kremlin denied its connection with the action, but Estonian security specialists discovered that there were computers of the Russian administration participating in the

The action was spurred by the Estonian government removing a statue of a bronze soldier, symbolising Soviet occupation, from the city centre of Tallinn to a military cemetery, which angered many Russians.

It was a DDoS (*Distributed Denial of Service*) type attack, where hackers overload a server with millions of empty requests so that it stops working properly. The result is a website which is almost inaccessible or completely down. Estonian information security specialists were successful in warding off the attacks, an action which has been praised by many large media publications, such as The New York Times and The Economist. Many states have sent their computer protection specialists to Estonia to learn from the experiences here.

Since 2007, DDoS attacks between departments of different states have become practically daily events. For example, in August 2008, during the Russian-Georgian war, Georgia's official departments came under attack. At the end of the year, there was a short series of attacks on the campaign pages of the United States presidential candidates Barack Obama and John McCain, as well as on the web pages of the IMF and the World Bank.

A new wave of attacks against US and South Korean web pages took place in July of this year. The targets were the web pages of the US Foreign Office, the South Korean Ministry of Finance, the New York Stock Exchange and NYSE Euronext.

Almost without exception, such attacks are linked to political tensions. Just take a look at current affairs in order to understand that there is a clear interest group. For example, in the case of attacks against Estonia and Georgia, Russia was suspected. If not a case of "state request", then at least the silent

approval of the Russian government was there. In the case of the attacks against the US and South Korea, the hand of hostile North Korea was suspected.

The investigation into the attacks against Estonia ran into a dead end, as the Russian Prosecution Office declined to cooperate. However, one young Russian man living in Tallinn was convicted of an attack against the homepage of the ruling party, the Reform Party. He was fined 1,640 US dollars.

For many states, the experience of Estonia in 2007 was a wake-up call. People realised that such intervention is more of a threat to states than it had been considered previously. Organised crime today is already, in principle, able to create huge traffic jams, and paralyse media and business, governmental and public services, including controlling the operation of strategic weapons.

Kenneth Geers: "An attack with tanks and missiles seems, at first, more destructive than what can be achieved with a couple of computers. But let's not forget that computers, networks and databases control practically everything in modern society. Even a tank uses a computer in order to aim at its target. In the same way, mass weapons are administered via computers."

# Multinational ICT companies present in Estonia

Amphenol, US (manufacturing in Estonia since 1996)

Cisco Systems, US (sales/service office in Estonia since 2006)

**Ericsson**, SWE (services, mobile application development, manufacturing in Estonia since 1999 –

big expansion in 2009 (acquiring Elcoteq (FIN) manufacturing units in Estonia)

**IBM**, US (sales/service center in Estonia since 1997)

Microsoft Innovation Center, US (development center in Estonia since 2009)

Nokia Siemens Network, FIN/GER (development, service center in Estonia since 2006)

**Skype Technologies**, LUX (development center in Estonia since 2003)

**Stoneridge** (manufacturing in Estonia since 1998, expansion in 2007)), US

Symantec, US (development office in Estonia since 1993, expansion in 2007 (after acquiring Altiris (US))



Cisco Systems Estonia started its activities in 1997 and until 2006 remained a sub-branch of Cisco Finland. Its main activities include assistance and consultation for partners and end customers in relation to everything to do with Cisco products, especially large and complex projects. Cisco is a world leader when it comes to commutators, routers, cyber-security, WiFi, VoIP and TelePresence solutions. In the last few years, Linksys, Scientific Atlanta, Webec and IronPort have joined Cisco. IronPort is considered to be the most effective junk and suspicious mail Web filter. Webex is a leader in offering

web-lecture-video conference solutions. All those products have been marketed in Estonia through Cisco Systems' partners. Cisco has 73 partners in Estonia.

One role of Cisco Systems Estonia is the marketing of Cisco products in Estonia and sharing experiences from the rest of the world with its Estonian partners and customers. The other task is to provide the main office with information about the events taking place in the Estonian IT landscape. The cyber attacks of 2007 should be mentioned here: Cisco security systems effectively protected the computer systems of public departments and large banks. Cisco security solutions include both infrastructure solutions (firewalls, attack defense, VPN, e-mail and web traffic) and solutions protecting the computers of end users. An important component of all security solutions is the global Sensorbase network (about 750,000 censors), which makes it possible to operatively discover and prevent the activities of malware, typically 14 hours faster than our closest competitors.

# Some Estonian IC1 companies/start-ups going global:

Artec Group (product development company with a competence span covering wireless technologies, data security, networking interfaces and various CPU hardware platforms)

www.artecgroup.com

**Fits.me** (the virtual fitting room for online clothing shops) **www.fitsme.com** 

**Fotki** (online community of photo fans who share their work online)

www.fotki.com

**MobileNow** (provider of digital permit and mobile payment solutions)

www.mobilenowsolutions.com

Modesat Communications (innovation leader in high capacity and reliable modulator-demodulator DSP Cores for wired and wireless broadband solutions)

**Regio** (mapping, geospatial data, geographical information systems (GIS) and mobile positioning) **www.regio.ee** 

**KFP Development** (international financial consulting firm advising on capital markets products and derivatives)

www.kfpsalsa.com

United Dogs & Cats (helps you communicate with other petowners from around the world and take better care of your pet) en.uniteddogs.com

**Yoga** (self-learning Intelligent Building System)

www.yoga.ee

Webmedia (high-end software development)
webmedia.ee

### **E-governance:**

# super-services for citizens

www.nokiasiemensnetworks.com/ global/Insight/uniteMagazine/ September+2008/E-governance+superservices+for+citizens. htm?languagecode=en

# Estonia leads the way

Few countries can match the success of Estonia in developing and using e-governance services. Over the last decade Estonia has built an advanced e-governance infrastructure that is enabling complex services that combine the information from several government databases.

Tasks, such as applying for social security benefits for new parents, now take minutes to complete online, not the laborious process of document filling and approval that traditional paper-based systems incur. "The use of mobile systems for public services is growing but there are limitations," says Ivar Tallo, Manager of e-Governance Program at the United Nations Institute for Training and Research (UNITAR) and one of the early architects of Estonia's e-governance success. "M-governance is unlikely to replace e-governance, but it will add value. If lots of information needs inputting, then it is easier to use devices other than mobiles due to the restrictions of the small screen and small keyboard."

#### **NOKIA SIEMENS NETWORK**

Abstract from 'Unite Magazine' (Nokia Siemens Networks customer magazine)



# President Ilves: Estonia is interested in co-operation to decrease cyber space vulnerability

In June, President of the Republic of Estonia Toomas Hendrik Ilves paid a working visit to the west coast of the United States of America, to the research and state-of-the-art technology centre of Silicon Valley. A business delegation accompanied the President on his visits to Symantec, eBay/ Skype and Apple.

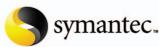
The President met with Mr. John W. Thompson, Chairman of Symantec Corporation, the world's largest information security solutions company, who together with other executives of the company gave an overview of the activities and priorities of Symantec in the protection of IT infrastructure at the individual user, corporative and national levels.

At the meeting, it was admitted that the cyber attacks launched against Estonia in 2007 have been an eye-opener in many countries. It was also stressed that efficient international co-operation between the private and public sectors is required in order to anticipate such threats and to deal with their consequences, especially in terms of crafting legislation.

"Estonia is one of the European Union's voices in the field of cyber defence," President Ilves noted. "This is the reason why we are very much interested in any form of co-operation which is aimed at decreasing cyber space vulnerability."







SYMANTEC ESTONIA OÜ was established back in 1993. Since 2002 the Estonian entity has been a subsidiary of Altiris, Inc, a software development company based in Utah, USA and operating in Estonia under the business name of Altiris Estonia OÜ. In April 2007 Altiris, including its Estonian subsidiary, was acquired by Symantec, Inc - an international software development company with headquarters located in Cupertino, CA, USA and with branches worldwide. In 2007 the business name of the Estonian company was changed to Symantec Estonia OÜ. The stable and advantageous business situation in Estonia is attractive for investments from other companies, and the Estonian entity is constantly growing in all sectors. The company's activities are a development of complex server-client applications for MS Windows and the Unix-Linux environment, and the providing of technical support for our customers in Western and Eastern Europe. As of September 2009 the total headcount of the Estonian entity is 110 employees (including software developers, test engineers, technical support engineers, sales personnel and human resources).



John Thompson, Chairman of Symantec Corporation on Symantec's involvement in Estonia: "Estonia is highly developed when it comes to the use of online applications and the use of the Internet. President Ilves is committed to utilising the Internet to the greatest extent possible for economic and social purposes. As such, Estonia is a natural fit for Symantec as an anchor for our operations, not only in Estonia but throughout the Baltic region. We look forward to supporting Estonia in its efforts to be a leader in IT and cyber security issues."

#### Source: Kaspersky Top 10 of computer virus and contaminator states COUNTRIES WHERE MOST ATTEMPTS TO INFECT (August 2009) COMPUTERS VIA THE WEB OCCURRED: POSITION NUMBER OF NAME INFECTED CHINA **COMPUTERS** UNITED STATES Net-Worm.Win32.Kido.ih 48,281 24.3% INDIA Virus.Win32.Sality.aa 23,156 2 39.4% RUSSIAN FEDERATION 3. not-a-virus:AdWare.Win32.Boran.z 16,872 UNITED KINGDOM 4 Trojan-Downloader.Win32.VB.eql 8,030 BRA7II 5. Trojan.Win32.Autoit.ci 7,846 ITAIY 6. Virus.Win32.Virut.ce 6.248 5% 2.7% 6.9% 7.2% 8.7% SAUDI ARABIA 5,516 7. Worm.Win32.AutoRun.dui VIETNAM Net-Worm.Win32.Kido.jq 5,446 GERMANY 9. Virus.Win32.Sality.z 5,157 Other Virus.Win32.Induc.a 10. 4.476



(January - June)

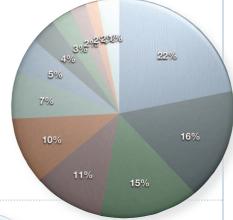
#### CONCLUSION

- The economic crisis has not impacted the volume of spam: spam averaged 85.5% of email traffic.
- Malicious attachments were found in 0.3% of messages.
- 0.6% of all messages contained links to phishing sites.
- Asian and Latin American countries were the main sources of spam, with a shift away from Western European countries, the US and Russia.
- The amount of spam advertising small and medium businesses declined during the recession.
- Spam advertising spammer services has partly replaced messages containing offers for concrete goods and services.

#### SPAM IN THE COMPUTER NETWORK BY TYPE IN RUSSIA 2009



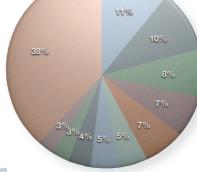
- e-advertising services
- Other goods and services
- Adult content spam
- Education
- Fake designer goods
- Real estate
- Travel and tourism
- Computers and the Internet
- Legal and audit services
- Computer fraud
- Personal finances
- Printing services



#### SPAM SPREADING STATES 2009



Others

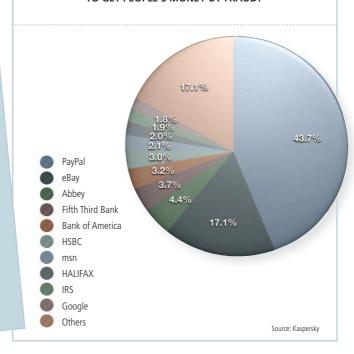


Source: Kaspersky

# How you could become a victim of e-crime and lose your money

- 1. Answer a plea of help or a letter announcing a windfall from
- Nigeria. Pay 10% of the sum you are promised. 2. Get and keep on your computer a malware, such as Zeus or
- Sinowal. In a couple of days you will notice significant changes 3. Click on a banner which offers a really new (albeit with an un-
- known name) antivirus software. Call their for-pay phone line, where you will receive an explanation of how your current antivirus software is old and should be deleted immediately.
- 4. Click on all the links which your friends' computers send to your MSN window without thinking first.
- 5. Use different P2P environments (e.g. e-Mule or LimeWire) to get interesting software. Up to 30% of files there are contaminated and the newest trend is a key generator (you know, that thingy which calculates your license key) infected with a bank virus. Balance rules in nature: the money saved from buying a computer programme is balanced by the virus drawing funds from your bank account.

#### FRAUD IN THE NAME OF EBAY AND PAYPAL WHAT COMPANY NAMES CRIMINALS USE IN ORDER TO GET PEOPLE'S MONEY BY FRAUD?

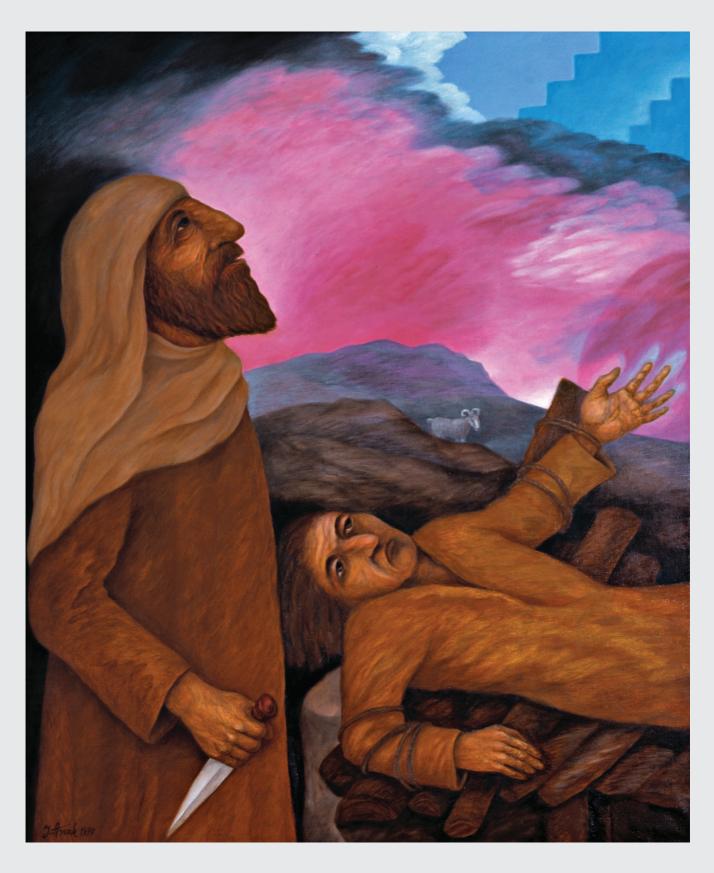


# PORTFOLIO\_JÜRI ARRAK

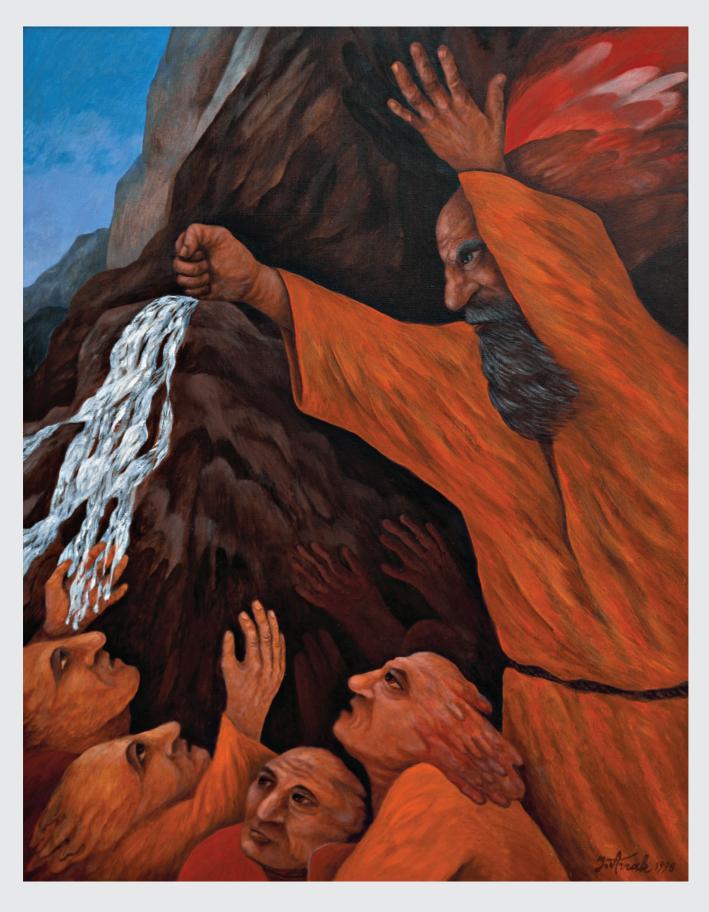


Mark the Evangelist.

2005 | 97x69 | Oil on canvas



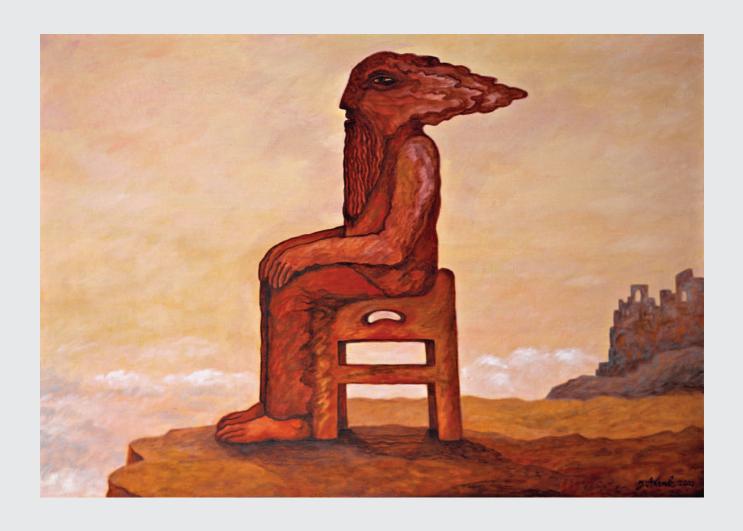
Abraham's Victim. 1999 | 119x99 | Oil on canvas



Moses Strikes the Rock and Water Comes Out of It. 1998 | 120x95 | Oil on canvas



Statue with a Statue. 1999 | 53x70 | Oil on canvas



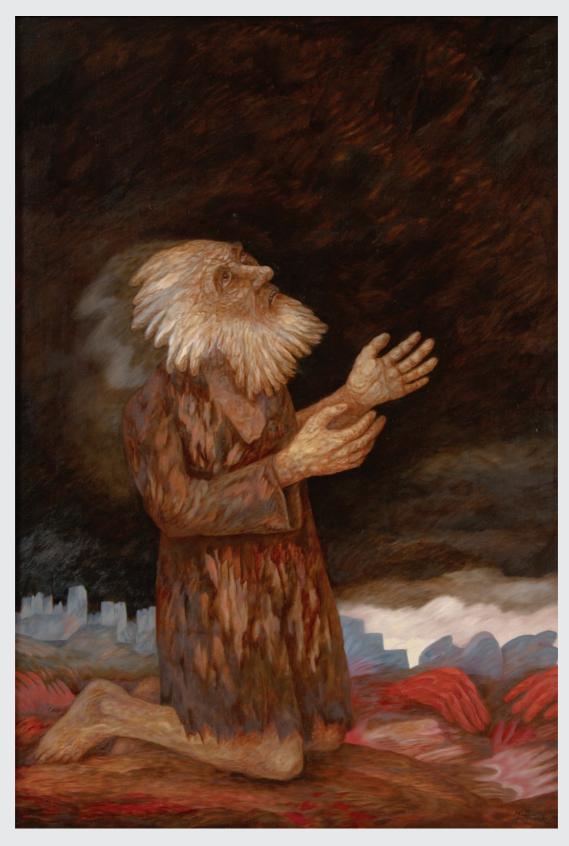
At the Steep. 2000 | 97x140 | Oil on canvas



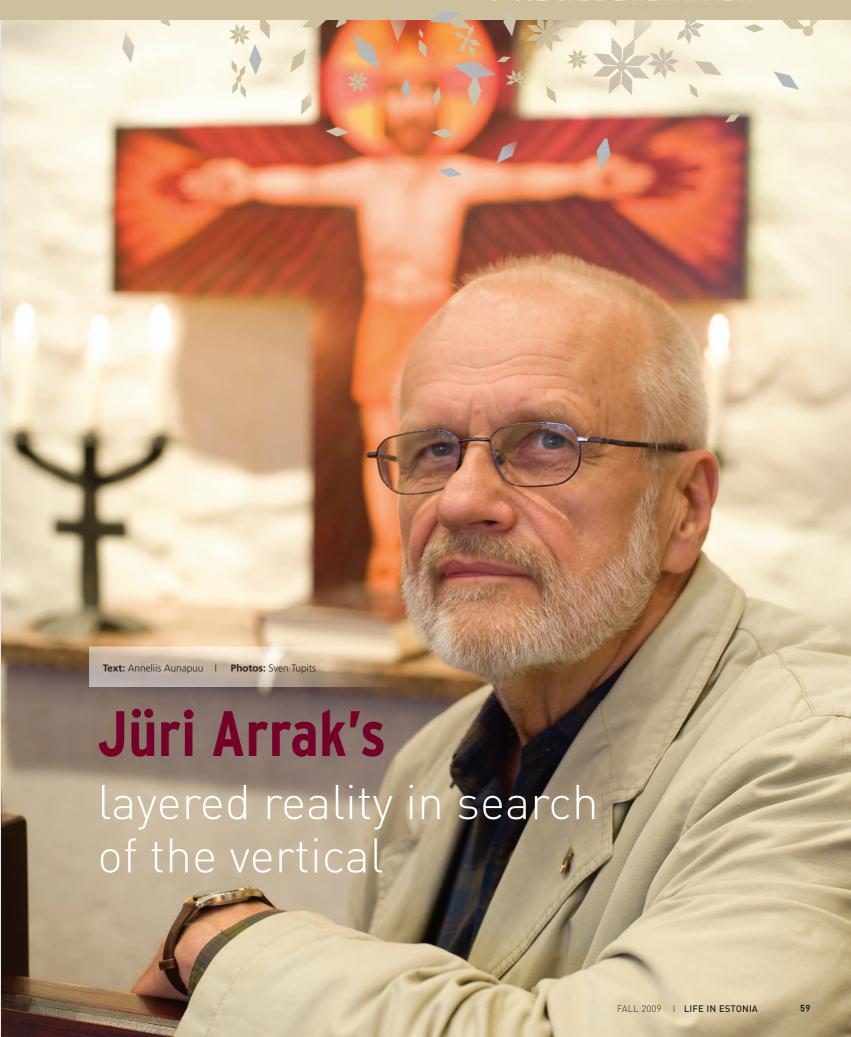
Red Sun in Black Sky. 2006 | 120x120 | Oil on canvas



Cry into the Night. 2007 | 94x80 | Oil on canvas



Job. 1996 | 140x97 | Oil on canvas



Similarly to his own drawing of an apparition with a head of flames, he appeared on the Estonian arts scene forty years ago. He painted the first post-war church altar in Estonia and is currently enjoying working on the scene of the Last Supper.

The painter Jüri Arrak has made a lasting impression on people, as has his painting of the aggressive and meaningful figure with a "shrub of flames" on its head, although he has for some time now been painting saints. Immersing himself in the spiritual world and expressing this in the language of images, in addition to his important statements on social issues, have yielded an unexpected result. The angry outcries from the audience which accompanied his debut have given way to approval on the highest levels. The declarer of disaster has become a comforter, a joker, a saint.

#### Tiptoeing to get a better view

Arrak's studio is located on a roof like a hybrid of the legendary Parisian attic and the house of Karlsson. "The climate here is continental," he laughs. Everything else is "like the real thing", with walls full of important figures, cuttings and postcards mixed with humorous gifts from fellow fighters and paintings from various eras. All of it seems important to the owner. In any case, the environment is culturally thick and inspiring.

Arrak is a good storyteller and happy to speak about anything – life, work, temptations, mistakes, experiences,

pains, spirituality, of desperation and of transfiguration. Life it seems has carelessly thrown him about, but he himself is starting to feel as if all of it may have some sense and purpose. Listening to his amazing story, it becomes clear that a sense of security is not something that life has given him. Shadows of the past at home, an appendix which burst at the age of three, nerve-racking times when his father had to be hidden from the Reds, narrow escapes... Even the final escape of his father brought no relief for the family – cancer ruled in the final scene. This was followed by a move to the countryside, and losing their home. Thanks to the Stalinist path, his







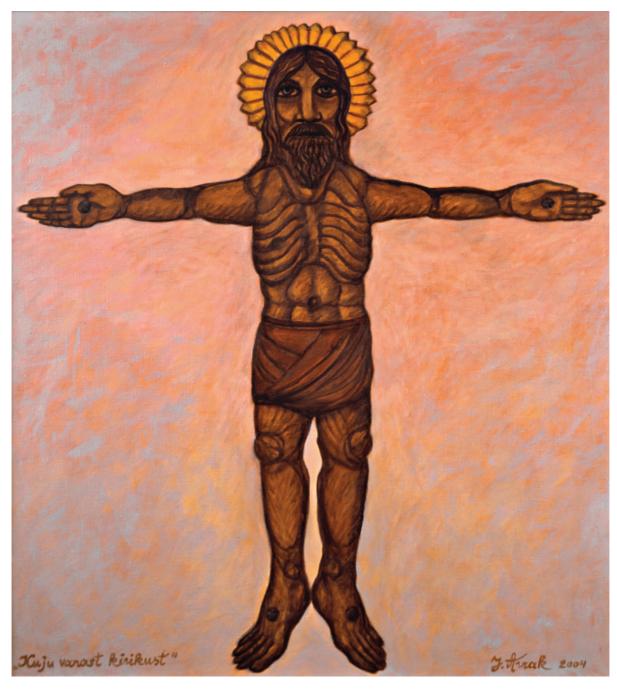


Image from an Old Church.

2004 | Oil on canvas

schooling took him to the Polytechnic Institute of Mining and from there to an oil shale mine. In picturing this fifteen year old boy down in the dark underground tunnels, in the rough proletarian world as an apprentice, the claustrophobia, the fear of getting lost and the luminous eyewhites of his future paintings suddenly become all the more understandable...

It was the Soviet army that rescued him from the oppressive, vodka-reeking life of a miner. Again the smirk of fate: as he says himself, he must have been the only Estonian who really WANTED to join the Red Army, as for him it meant coming up from the underground. Then fate spared him a worse fortune – instead of becoming one of the Punishment Battalions in the hell that

was Hungary in 1956, a twist in international politics turned their battallion into a labour battallion. In Khruschev's era, the Soviet Union "reduced" its army, replacing some of the weapons with tools, the uniforms with overalls. Hence, for three years Private Arrak became a driver-soldier who lived in an army barracks and earned his own living. After the army he had another adventure as a taxi-driver in Leningrad...

#### The current of life led to art

One tidal wave almost took him to study mining in St Petersburg, but another one pulled him back. Back at home, his brother Henno, an art student,

convinced him of the necessity of making art. Quite unexpectedly, he found his name among those who applied successfully to the Art Institute, in the Department of Metalwork. But in reality Arrak wanted to draw and paint, which he did passionately with his fellow students, soon forming the vigorous group ANK 64. They were inspired by surrealism and pop art, encouraged each other, developed Estonian art, and exhilarated and scared the art public.

Back then the ticket to artistic freedom was provided by joining the Union of Artists, a precondition for which was a personal exhibition. However, as there was no free exhibition space to hold one in 1969, Jüri Arrak was taken in as a member of the section of graphic arts, on the condition that he would organise an exhibition in the following year. "Since I'm already in the Union of Artists, I will have an exhibition of paintings!» Arrak said, smiling smugly to himself. He filled the Art Hall with paintings of flat "token people". The exhibition, with its clear, bright, pop arty colours and abstract surface treatment, crossed the border, and it trampled on everything that was considered good taste in the overly-regulated and closed Estonian art hierarchy of the time. This little "tempest in a teapot" fixed the name of Jüri Arrak forever in the minds of the Estonian art public.

#### Two or three dimensions? Perhaps four?

Both Arrak's graphic art and paintings have always reflected the passionate world, the desires and pursuits of men, predicting disaster and disguising repressed fears with intrusive images. Although he always has some trick up his sleeve, his handwriting has remained constant and recognisable over the years. He himself believes that he has not clung to a certain formal system: "This is just what my hand does," he says.

By simplifying his bright coloured images to the point of carelessness, he proceeds within his own rules, secretly aiming for symmetry and divine harmony. His works are often like windows into the harsh ancient world, full of



Illusionist. 1977 | 50x49 | Etching

#### **Biography**

Born on 24 October 1936 in Tallinn

1966 graduated from the Estonian State Art Institute's metalwork department

1967-1968 worked as an artist in the Tallinn Metal Product Factory
1969 member of the Estonian Artist's Association, since then a freelance artist

1972-1973 chairman of the graphics section of the Estonian Artist's Association

1982-1987 chairman of the painting section of the Estonian Artist's Association

1996-1997 Visiting Professor of Fine Arts at the University of Tartu

Since 2003 a member of the European Academy of Sciences & Arts

Has participated in art exhibitions in Estonia since 1964,

and in international exhibitions since 1969.

Has organised several happenings.

#### Collections

Estonian Art Museum, Tallinn, Estonia

Tartu Art Museum, Estonia

MoMa, New York, USA

Krakow National Museum, Poland

Tretjakow Gallery, Moscow, Russia

Ludwig Art Museum, Cologne, Germany

Zimmerli Art Museum, Rutgers, New Jersey, USA

Randers Art Museum, Denmark

Museum of the University of Western Sydney, Australia

New York Public Library, USA

The White House, Washington

... among many others

#### **Prizes**

1990 Kristjan Raud Annual Award

1997 Konrad Mägi Medal

2000 The Order of the White Star, 2nd rank

2005 Karl Eduard Sööt Prize for children's book illustrations

2006 Estonian Culture Ministry Award

2007 Estonian National Culture Foundation Lifetime Achievement Award

2007 EELC Order of Merit, 3rd rank

2009 The Golden Badge of the Estonian Ministry of Defence

#### **Exhibitions**

Has held 72 exhibitions in 15 countries

Among them:

1970 Tallinn Art Gallery

1982 Tartu Art Museum

1983 Estonian Art Museum, Tallinn

1994 Antinor Gallery, Athens, Greece

1994 Estonian Embassy, Stockholm, Sweden

1994 Estonian Embassy, Bonn, Germany

1996 Estonian Embassy, Washington, USA

1998 Randers Art Museum, Randers, Denmark

2000 Estonian Embassy, Moscow, Russia

2001 Gallery of Art Association, Trondheim, Norway

2003 Estonian Embassy, Berlin, Germany

2005 Gallery of Hungarian Fine and Applied Artistis' Association, Budapest

2005 Art 9 Gallery, Budapest, Hungary

2005 Lamelli Gallery, Krakow, Poland

2005 National Library, Warsaw, Poland

2006 Kumu Museum, Tallinn, Estonia (early works)

2007 Convento des Cardeais, Lisbon, Portugal

2009 Art Museum, Viinistu, Estonia (together with his wife Ivi Arrak)



Gambler.

1976 | 48x50 | Etching

temptations, failures, battles, meaningless fidgeting, betrayal, despair and the premonition of doom. (They are reminscent of the works of Hieronymus Bosch and Pieter Brueghel the Elder, of Kristjan Raud and Andy Warhol...) The traditional third dimension in a painting—depth—is usually very limited in Arrak's works. The figures swarming on the surface of his paintings resemble colourful flat dolls. A slight "shading" has proved to be inevitable over time in order to bring out the position of certain limbs. An additional dimension is the spiritual glow above his paintings (energy, force, emotion, meaning, story...).

And then unexpectedly a certain painted detail breaks through the even colour – an eye opens; a face protrudes, becoming a mask; edges split; the surface thins into fur or feathers, flowing as a fabric into classical drapery – until it seems that there are layers of images in relief flowing in the window of the painting. Yet all of this seems like a dreamy game. An enticing and engaging game which can become addictive, drawing attention to yet another precarious side of humanity...

Repetitive images sometimes become concentrated to become universal symbols. One drawing shows a good example of a symbol (which loses something in translation) – a lonely hand with a hole on both ends. The hole on the upper part of the hand refers to its origins as part of a jumping jack or marionette—being guided by a higher power; the hole next to the palm refers to divine origins, to suffering and atonement. The whole of world culture and the essence of life are contained within one line and two dots...

#### Towards spirituality with meagre resources

Hence Arrak employs very meagre resources. This guarantees that the message is delivered – the viewer's attention does not get tangled in beauty or detail. Thanks to their clarity, his paintings are instantly graspable; you can say "ok" and proceed, but the creatures who stare at the viewers with sharp intent remain with you for a long time, like a restless dream. The emotion makes use of the seeming simplicity of the picture, throwing itself with great intensity at the viewer at the speed of light. The moment depicted in the

painting is usually "of the grey old times", about which Arrak has his own story to tell.

"I have always liked doing paintings on the subject of myths and biblical themes," explains Jüri Arrak, "and if this is critically called 'just illustrative', then let us recall that really all art of the Christian world has been illustrations: illustrations of life, of biblical subjects and ideas, the divine family... whatever."

Besides the illustrative large format, Jüri Arrak has also illustrated books. He has captured the attention of the younger Estonian audience with several children's books, where the illustrations cannot be accused of feminine fluffiness.

Over time, the art public has become accustomed to Jüri Arrak's straightforward way of expressing himself, which spares no feelings, just as people have become accustomed to heavy metal – they begin to see the message behind the aggression. This comparison is all the more relevant, as the Estonian "Viking metal" group Metsatöll asked Arrak to participate in the design of their record covers. The way those young musicians and the artist think finds common ground. Also, the less alternative sections of society have begun to accept the spiritual dimension of Arrak's activities, which is much more important than his masculine, untamed way of expressing himself.

In general, Arrak's scenes only reflect the male world. Once in a while, a female figure wanders into the scene but most of the time she remains lost there, a vision from another reality, an object rather than the other half. Even her existence is a problem. Yet in real life things couldn't be further from the truth – Jüri has influenced his beautiful wife lvi, who is a psychologist, to start painting. In August 2009 they held a double exhibition at the Viinistu Art Museum entitled "Woman and Man".

#### In battle, light wins

The canvas remains a battleground for Arrak, a fight between threats and resistance, good and evil, between colours and between two- and three-dimensionality. But more often than not the good wins: balance, the king, the ruler, God. As Arrak says, people need ideology and the best choice is the one that has been with your people for generations. Having searched here and there, he has chosen Christianity, not as a collective activity but as spiritual energy.

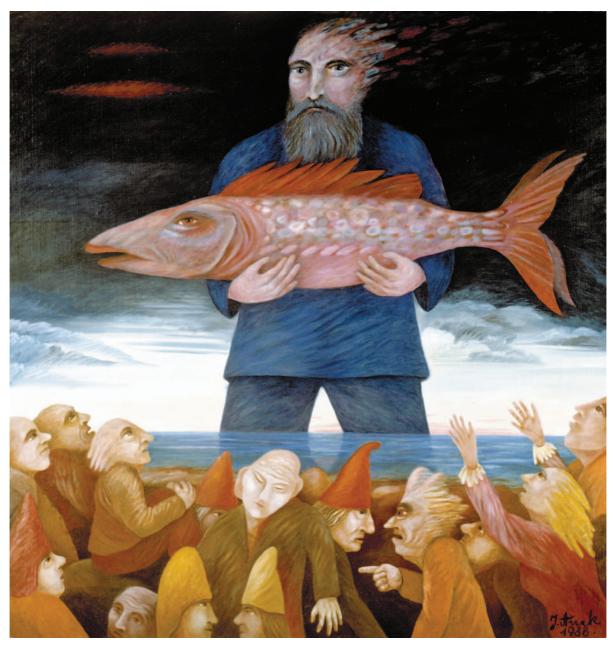
Considering all of this, it no longer comes as a surprise that Jüri Arrak received the honourable task of painting a post-war altarpiece for the Halliste church. No one has said that it is heretical, ugly or unsuitable.

He expresses his credo in the *World View of an Artist*, which he published after painting the Halliste altarpiece (see the book *Võsa, aas ja mägi*, Ilmamaa 2003).

Such vivacity, audacity and meaningfulness has brought Jüri Arrak various art and social prizes, including the reputable Kristjan Raud Award, the Second Class Honour of the White Cross, and the Third Class Service Cross of the Estonian Evangelical Lutheran Church.

#### When the organ plays with full force

He has painted another altarpiece since the one in Halliste or, to be more precise, he has designed the whole chapel of the Institute of Religious Studies, which is located in the oldest alms house in Tallinn, next to the Pühavaimu Church. There Jüri Arrak's figurative multi-functionality opens like a fan – he



Big Fish.

1988 | I 145x140 | Oil on canvas

has designed everything from the benches, the pulpit, the stained glass, the candle holders, the silver Sacrament dishes, and the leather Bible cover to the altar cross painted on oak, with Christ looking down in a clear and calm manner and wearing a golden crown instead of a crown of thorns.

"I don't like depicting Jesus as a martyr on the Cross; I'd rather show him as a ruler, a winner, the saviour, despite the nails," says Arrak. Without sinning against the tradition and main principles of Christianity, he thus delivers hope, love and the triumph of light inherent in the religion.

Above the Cross, on the headstone between the pillars, Arrak placed an all-seeing bronze eye, and the ends of the side tables of the benches are adorned with a gradation which recalls the gable of the Pühavaimu Church next door. "I like this work", he admits, having in mind the totality, and at the same time demonstrating how ergonomically the bookstands and the

kneeling benches, which can be pulled down, have been made. Such a flash of constructive talent recalls the source of his education –the guy from the Polytechnic Institute of Mining has not disappeared totally! He recalls with a smile that the students were taught (industrial) design principles in metalwork department..

Upon leaving Arrak's studio, one leaves behind a borderless and extremely dense world. There are many canvases, most of them with their backs calmly to the viewer, but should one of them turn around, figures would swarm carelessly around the room with a feverish look in their penetrating eyes, chased by the fears and pressures of different periods of life. He himself seems to have made peace with his own characters, the tormentors and sufferers caught on canvas. All that's left is to wish Arrak strength in climbing up the mountain of spirituality!





Text: Andri Maimets | Foundation Tallinn 2011 Photos: Rene Pringi, Andres Teiss

# Tallinn-

# Cultural Capital of Europe 2011 - is building a friendship with the sea



Close your eyes and imagine that you are sitting near a romantic seaside promenade of a European city on a laid-back afternoon: the laughter of seagulls and children cuts into the sound of lapping waves, the honk of a distant ship horn and the clanking of anchor chains of sailboats; elderly couples and the young, freshly in-love, chat on the bench beside you; the exhilarating aroma of a just-made espresso wafts into your nostrils from a nearby cafe and a melancholy guitar tune is played by a young lad sitting under a tree. Every now and then, a couple of lads on skateboards swoosh by, followed by a joyful group on bikes. The only reminder of the vicinity of a city is the distant hustle of traffic, sirens and the creaking of trams passing by.

# Cyclicious cultural capital

The people who work at the Cultural Capital Foundation love to ride their bikes, whether it be to work or to meetings, across town, to the seaside or to visit friends in the evening. "We believe that if on one fine day enough people in Tallinn ride their bikes, we will become equal partners to buses, trams, pedestrians and cars, and Tallinn will look truly European," comments the head of the Foundation, Mikko Fritze.



The Foundation is also one of the initiators of the project "Make Estonia Rich in Bikes!" "In order to set a good example, we are as bike friendly as it gets: many of us come to work on bikes and we have our own bike parking spaces in the courtyard. We also have a shower room to freshen up in on a hot day, although you don't necessarily break into a sweat while biking calmly, so we don't always need to use it. We often take our bikes to meetings and hence we can recommend to organisations that they let people know on their websites where to park bikes when visiting the organisations," says Fritze.

# Smart people pedal; make the city rich in bikes!

See more:

www.rattarikkaks.ee



Anyone who lets their imagination wander into such a setting will think of a favourite city. Copenhagen? Marseille? Barcelona? Istanbul? But why not imagine such a place to be Tallinn, one of the most wonderful gems on the Baltic Sea coast? True, when you look around the Tallinn seaside promenade today, you are struck by the fact that the reality is far from such a vision.

But surely the reader does not believe that such seaside oases appeared overnight, of their own accord, in the above-mentioned towns. Those cities, too, have made efforts for decades to bring people to the seashore, to show them that it is worth a visit. If the truth be told, half a century of closed coastal areas, foreign power and forbidden zones have somewhat alienated the residents of Estonia's capital from the sea and have turned the shore areas into a dreary noman's land.

Tallinn, which will be the European Capital of Culture in 2011, has not given up. The Tallinn 2011 Foundation, in charge of the cultural year, has set itself the task of bringing people back to the joys of the sea in just a year and a half, to make the seashore something more than a port that you rush through on your way to Finland or Sweden, to give birth to an enviable cultural life in ghost palaces ravaged by time. Of course, a dignified cultural programme is not enough – opening the city to the sea and cleaning up the

seaside is a formidable task. Fortunately, work is already underway to give the people of Tallinn a reason to go to the currently barely accessible coastal area between the statue of Russalka and Paljassaare, in addition to the currently open area between Russalka and Miiduranna.

The head of the Tallinn 2011 Foundation, the charismatic Finn of German origin Mikko Fritze, has explained in the local media that the sea theme and linking culture with the sea was an idea which came from Estonians themselves. "We asked people for ideas which we could focus activities on and from their answers we realised that Tallinn has no link between the city and the sea. This is how we got the idea of telling stories, stories of the seashore," says Fritze. "Tallinn is a city which offers more to people than you think. It is a city with much to say." Hence the Cultural Capital will connect Estonian history through the sea, Tallinn's location by the seaside and the consequent cultural mixing, contacts and opposition.

#### Estonians, a sea people

"Claptrap", the critical reader may say, perhaps adding with incredulity that it will all remain a dream. But this is not true, as already the summer which has just ended confirmed the reputation of Estonians as a sea people - a yearning for the sea is rooted deeply within us. One such example is the Song and Dance Festival

of 2009 which, in addition to featuring songs and stories about the sea, attracted thousands of Estonian people to the coast, in order to watch strong-willed compatriots bring the festival torch against the currents, through the country, landing with the distinguished fleet in the Admiralty Basin of the Port of Tallinn the night before the celebrations began.

Just a few days later, the same Admiralty Basin attracted the locals back to the seaside when the grandest Tallinn Maritime Days in history took place here in abundant sunshine. Nearly 50,000 people – old and young, families and couples – came to admire the historical sailboats anchored in the Port of Tallinn, to look around the fish market and the seaside theatre, to watch the fish-soup cooking competition and listen to good Estonian musicians, to participate in photography courses and take an adventurous bike ride, the means of transport promoted by the environmentally conscious organising team of the Cultural Capital project. The Maritime Days, with one of the passenger terminals turned into a cosy jazz stage, also brought out the cultural elite, which usually looks for its summer entertainment elsewhere.

Undoubtedly, the biggest hit were the small boats which moved between the two ports – Admiralty Basin and Seaplane Harbour – and made many a visitor dream of water taxis operating in the Bay of Tallinn. Not only were the organisers amazed by the popularity of the event and interest in the sea, but also foreign seamen admitted that they were flattered by such a crowded reception.

So our love of the sea is not claptrap. The Tallinn Maritime Days will also be part and parcel of the activities in 2011 when there will be busy goings-on in the two ports, at the Admiralty Basin and in the hangers of the Seaplane Harbour.



# Tallinn 2011 and stories of the seashore

In 2011, the biggest storytelling event in Estonian history will take place in Tallinn. Writers, musicians, artists and actors will tell, paint, sing and act out tales inspired by the sea, tales of Estonia and its people. The stories will be short and long, modern and ancient, happy and sad and, most importantly, they will be Estonian-like.

Storytelling gives birth to meaning and understanding. Our stories help to discover and preserve the image of a young Estonia as part of Europe. A story does not always have to be positive, just as life is not entirely positive. The hero of a story must conquer challenges, but in the process also undergo personal transformation. It is the same with the story of Estonia's history: Estonia has often been at the crossroads of other cultures and this is clearly echoed in our stories, always in a lively and intriguing way.



The main theme of Tallinn 2011, "Stories of the Seashore", encapsulates Estonian history and Tallinn's physical location next to the sea, which explains Estonia's rich cultural diversity, contacts and conflicts. The larger theme is also organised into three smaller parts:

"Stories of singing together" describe how we are all changing the world – through democracy, citizenship, community, freedom and traditions. In truth, the song and dance festivals are our biggest stories of all – we are a people of song and dance; we have the ability to come together and, unified, we are victorious; we cannot forget that it is through singing that we won our freedom. Additional musical events include the Birgitta Festival and the youth subculture project AfroReggae.

"Stories of the living old city" tell the story of Tallinn as a city where time never stops. Every morning, the citizens write a new page in our city's history. This can be witnessed in the Old Town's drama festival, *Tallinn Teater Treff*, interpretive dance dialogues with architecture in "Open Spaces Living Art" and the Tallinn Marathon.

"Stories of Dreams and Surprises" speak of a city and country where the Internet has been declared a "human right" and which witnessed the world's first Cyberwar. Together we dream of opening the sea to the city, as happened in the Tallinn Maritime Days. Also planned are the audiovisual Plektrum Festival and the Student's Modern Art Triennial Experimenta!.

In 2011, Europe's best stories will be told in Tallinn!

#### CULTURE & ENTERTAINMENT









The late summer of 2009 created a third tradition which the sea-loving people were only too happy to join – tens of thousands acted on the initiative of *Mereblogi* (a sea blog which links friends of the sea), which invited people to light fires in memory of former co-passengers on all beaches on the last Saturday night in August. The aim of the Night of Ancient Lights was to see at least two bonfires by every coastal area in the country on that night. As *Mereblogi* reported about the outcome of its nice "trick", "most people who provided feedback reported at least five bonfires visible to them. There were certainly more than a thousand bonfires lit that night and over ten thousand candles or torches. Everyone who came to the seaside showed that Estonians are people of the seashore and the sea connects us with one another." The Night of Ancient Lights has earned its place in next year's events and in the events of the year after, when Tallinn is the Cultural Capital of Europe.

Those three events clearly show that there just needs to be a reason to go to the seashore – the power and spirit of the Baltic Sea charm many Estonian people and their guests. Even now, with more than a year to go until 2011, the Cultural Capital programme of activities, which is developing day by day and will last for 365 days, already has many stories of the seashore: for sporty Estonians there will be the seaside Tallinn Marathon and for culture lovers a new breath of life will blow into the Cultural Kettle, which is located by the sea and was the location for the famous "Stalker" movie by Andrei Tarkovski, where the scene of Stalker risking his life to enter the Zone was filmed. In a couple of years, the Cultural Kettle is set to become one of the most important seaside cultural forts around.

In addition to the above, we should also mention the annual Birgitta Festival, which takes place every August in the historic seaside monastery in Pirita, the world championships in fire sculptures, the seaside street culture festival and the outdoor cinema. Each one of them has its own story to tell and each has played a role in turning Tallinn, the Cultural Capital of Europe, into a better place. Each one of them confirms that the best stories in 2011 will indeed be told in Tallinn.



# 50 best Estonian restaurants

Text and photos: magazine KÖÖK www.ajakirikook.ee

In 2008, the first list of the top Estonian restaurants was compiled. There were surprises, disappointments, and a lot of genuine joy. It became clear that there are many unique eating places in Estonia, even more than expected. It was also good to hear that this list of top restaurants was eagerly awaited.

#### How was the list compiled?

The method was the same one which is used by *Restaurant Magazine* in assessing the restaurants of the world. The list was compiled on the basis of assessments by the key personnel of Estonian restaurants and by journalists. Head chefs, sommeliers, restaurant managers or owners compiled their own lists of the top five restaurants. Each restaurant which was named among the best also got the opportunity to express its opinion. This kind of evaluation is democratic and honest: everyone gives their assessment according to their conscience and nobody is allowed to vote for their own restaurant. And they know their competition pretty well.

Opinions differed widely. There were real gourmet restaurants and simple eateries offering homelike grub next to each other on the lists. This again shows that what is good and tasty can look different from place to place. However, opinions about the top of the top were similar. At the moment, they are the best. Everything could be turned upside down tomorrow, as life changes quickly.

Fortunately, it can be said that there are many good and unique places to eat in Estonia. It is worth coming from far away to eat in Estonia, and the number of such visitors is increasing year by year. In addition to the capital, it is worth driving around Estonia and dining in restaurants which are a bit further away. Your stomach will thank you for it.

Here we will name a few of the best restaurants among the top 50: for the second year running, first place was awarded to the restaurant Ö; the big surprise this year is the restaurant Ribe; in addition, the list included the restaurant Egoist, the creation of our culinary father Dimitri Demjanov, which was represented at the world-famous competition of chefs Bocuse d'Or by the head chef Vjatšeslav Djatšuk, the restaurant Kaerajaan, with its unique and modern Estonian cuisine, and the restaurant Alexander, situated on the romantic island of Muhu. The manor itself received five stars recently...

The Top 50 Estonian restaurants can be found at www.flavoursofestonia.com



#### I TOURISM







Head Chef: Roman Zaštšerinski

If such a place as restaurant Ö did not exist, we would have to invent it. Fortunately Ö exists. For the second year running it tops the charts of the best restaurants in Estonia. Therefore the latest victory was not arbitrary but well-earned. If your competitors respect you and customers keep coming back, you must be doing something right. And this is what the staff of Ö really does.

Much has been said about Chef Roman Zaštšerinski's love for Estonian produce and his ability to create wonderful taste combinations from it. Every

dish on the menu is a surprise for the tastebuds and only Roman and his team know how many sleepless nights and haow much work have gone into each taste. Such dedication to developing each dish and seeking out the right raw ingredients is very rare. There are not many chefs de cuisine who can be found in the forest, together with their staff, picking wood sorrel, chanterelles or lingonberries because they are just such wonderful ingredients.

# a guaranteed surprise

And when asked how things are going, there is no end to the enthusiasm and explanations! There is no sign of fatigue, boredom or complaints about lack of sleep or anything else... By the way, such enthusiasm is contagious, as many top chefs have trained with Roman before.

The contemporary interior, cozy atmosphere and exceptionally pleasant service guarantee that everybody, whether from near or far, will want to come back over and over again. Ö is one of the few restaurants in Estonia where foreign tourists come to eat as a planned part of their trip. Ö has become one of the important reasons, besides the dignified Old Town, to visit Tallinn. Dedication leads to the top.

Roman Zaštšerinski himself remains modest when commenting on his success: "The idea is the most important thing - everything else is just a technical issue."

Location: Mere pst 6 E, Tallinn Phone: +372 6616 150

www.restoran-o.ee



# much-loved by many

RIBE

Head Chef: **Jevgeni Jermoškin** Sommellier: **Margus Linkgreim** 



Ribe is a restaurant that is simple, understandable and modest at first sight. There don't seem to be any significant details or 'wow' factors when you step inside. But slowly the pieces start to come together. And they form such a perfect whole than when you step back out the door you think: "Wow, that was an experience!" This is what restaurants should be like.

They understand at Ribe that it only takes two seconds to get to know something and to form an impression. There are no second chances. At Ribe you are welcomed like an old friend. The first thing you see is a smiling person and from then on you feel taken care of. The head chef may concoct miracles in the kitchen but if the waiter throws it at you with a sullen face, the chef's work is pointless.

Everyone works in unison at Ribe – the men who founded this place know the restaurant business through and through. Ribe is not a restaurant which was born because someone just had the idea to open a restaurant one morning. It is a restaurant with a capital R and a safe choice. Everything has been thought through to the last detail and every person has a role to play in this business. If necessary, everyone helps out – even the owners are often busy serving customers.

The food served here is simple and natural, classical dishes based on French cuisine topped off by Estonian ingredients and uniqueness. The wine selection is good and the coffee steaming and hot and dark like it should be. And where else do you see everyone who served you that evening come to say goodbye and to thank you when you are leaving.

Ribe is much-loved by many. It is so cutely "Ribe-like" – simply genius.



Location: Vene 7, Tallinn Phone: +372 6313 084

www.ribe.ee

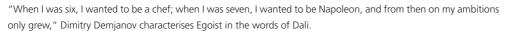


#### I TOURISM

# EGOIST

# only the best is good enough





Ambitions grow. At Egoist you can always enjoy the most exclusive cuisine in old-world luxury. The red carpet and exclusive interior may make the legs of many a gourmand tremble - so noble and measured seems this Temple of Gourmet. Only the best is good enough for Dmitri Demjanov.

It seems like a bit of an egoistic act of courage to offer gourmet food without compromising its quality, in the same place and with the same team for a decade. And this at a time when everybody yearns for change and new experiences. Restlessness seems to be our middle name, so only the serious gourmand and the egoistic food-lover find their way up the red-carpeted staircase leading to Egoist... And they won't regret it.

Vladislav Djatšuk made Egoist famous by being the first Estonian to compete at Bocuse d'Or. This was no easy task. He needed to prove himself and Estonian cuisine to the whole world. But it was a success. Vlad did so well that Estonia received an invitation to the next competition. The dedication with which the whole team, led by Dmitri Demjanov, prepared for the competition was enviable. Targets are reached only through willpower.

"I, EGOIST, am fully responsible for every bite and every sip you order from my kitchen and wine cellar, as I seriously believe that the best food demands the most demanding people in the world - us, EGOISTS - to enjoy it!" Go and check out for yourselves whether those words ring true. Be egoistic for once and only think of your own pleasure. Because while eating you only fill your own stomach and satisfy your own taste buds, not those of anybody else.

Long Live Egoists!







Cuisinier: Dimitri Demjanov Head Chef: Vladislav Diatšuk

LOCATION: Vene 33, Tallinn Phone: +372 646 4052

www.egoist.ee





Head Chef: Tony Sal-al-Saller

# KAERA – modern Estonia

For years people have asked why there isn't a restaurant serving ethnic Estonian cuisine in the Old Town which would also attract locals in addition to guests. Here it is – Restaurant Kaerajaan.

It has a jolly interior design and general concept, just like the simple and childlike Estonian folk dance from which it borrowed its name. In the beginning, there were those who doubted whether it was in good taste. But when the interior design of Kaerajaan received some public praise, such doubts died out. Instead, people came to eat here and they keep coming back, together with their friends from abroad or just on their own for lunch or dinner.

Kaerajaan is not a tourist trap, which one might suspect due to its location on the square with Tallinn's most expensive beer. Kaerajaan is a jolly and authentic place which pleases the eye as well as the tummy. Tony Salal-Saller offers real Estonian grub. It has brought true Estonian ingredients and even "kama" (a refreshing grain-based drink – ed.) back into high esteem, and it has done it more elegantly, with laughter and dance, than many Estonian food development programmes costing millions.

There's not much more to be said in praise; the numbers of guests provides sufficient testimony. It is a big deal that local people step in there voluntarily without feeling too 'ethnic'.

Time does not stand still, fellow countrymen. The quality of an ethnic restaurant is best valued by Estonians themselves. Otherwise, it would be like Vana Tallinn liquor: we don't drink it ourselves, but we take it as a present when we go across the border and then the Finns drink it.

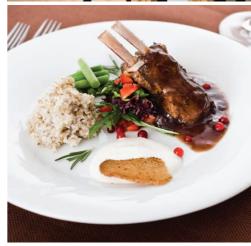
Kaerajaan does not need any recommendations or flattery. Enjoy its pleasant kitchen dance and let the tourists stay in Town Hall Square looking for pepper steak. *It is great to be Estonian...* 



Raekoja plats 17, Tallinn Phone: +372 615 5400

www.kaerajaan.ee







# ALEXANDER the pearl of the island of Muhu

"Essentially Muhu, passionately Nordic!"

If you want to escape to somewhere remote, then the Pädaste Manor, in its splendour, is just the place. Beautiful nature, stylishly restored manor house buildings and nicely tended surroundings. Simply divine!

The main building of the Pädaste Manor houses the restaurant Alexander. The well-restored cosy manor restaurant offers refined and elegantly presented dishes. The interior is grand and spacious, and there is a bright veranda. Everything is taken to perfection and carefully thought through. The grand piano in the corner suggests that on some evenings one can also delight in some live music.

The chef de cuisine, Peeter Pihel, has been all over the island of Muhu and has returned to Pädaste. Together with Kristo Malm, he has taken charge of the manor kitchen and created a new concept. It would make sense to keep an eye on these young men who have experience working in a Michelin-star restaurant. Pädaste is definitely worth a visit, not just for the food but for a whole weekend of enjoyment.

The new concept of the restaurant is simple and logical. They make use of everything that grows in, runs on, flies over or swims by Saaremaa and Muhumaa. As Peeter himself comes from the island of Saaremaa, he knows that there is no better food than a fried Baltic herring, especially when it's fresh. Ingredients which can be found in Estonia should be used first and only then should people look further. Back to our roots!

The experienced cooks concoct a refined and precious menu out of simple, down-to-earth ingredients. Yes, it is expensive, but not over-the-top expensive. They offer value for money.

How delightfully you sigh as you cast a glance around. And the food here is so tasty, you say after the meal...

It is undoubtedly one of the coolest manor houses in

Location: Pädaste, island of Muhu Phone: +372 454 8800

www.padaste.ee





Head Chef: Peeter Pihel















Official name: Republic of Estonia
State order: Parliamentary republic

Area: 45,227 sq kilometres (17,500 sq miles)

Population: 1,356,045 inhabitants: 69% Estonians, 26% Russians and 5% others
Population density: 35 people per square kilometre. Over 70% reside in urban centres

Capital: Tallinn with 405,562 inhabitants (01.09.2009)

Other major towns: Tartu (101,190), Narva (67,752), Kohtla-Järve (46,765), Pärnu (44,781)

Administrative divisions: 15 counties (*maakond*), divided further into 202 rural municipalities (*vald*)

Official language: Estonian, a member of the Finno-Ugric group. Russian is widely spoken.

Many Estonians speak English, German, Finnish or Swedish

Alphabet: Latin

Religion: Predominantly Protestant (Lutheran)

Currency: Estonian kroon (EEK), divided into 100 sents; 1 euro = 15.65 EEK

Driving: Right hand side of the road. Speed limits in town 50 km/h, out of town 90 km/h. International driving licence required

Weights and measures: Metric system
Electricity: 220 volts, 50 Hz
National flag: Blue-black-and-white

National holiday: 24 February (Independence Day)

National anthem: Mu isamaa, mu õnn ja rõõm (My fatherland, my joy and happiness)

National flower: Cornflower (*Centaurea cyanus*)
National bird: Chimney swallow (*Hirundo rustica*)





# Practical information for visitors



For more travel details, please consult the sources below: **www.visitestonia.com** (Estonian Tourist Board), **www.riik.ee/en/.** 

Tourist information centres are located in all larger towns

The Tallinn Tourist Information Centre in the Old Town is located at 4 Kullassepa Street - no more than 10 steps from the Town Hall Square (ph.: + 372 645 7777, e-mail: turismiinfo@tallinnlv.ee). The Tallinn Tourist Information Centre in Viru Keskus (ph: + 372 610 1557, 610 1558), open every day 9 am - 9 pm, is located in the centre of the city. A wide selection of maps, brochures and publications in several languages (largest selection in English) can be found at local bookstores and tourist information centres.

## Visa

As of 21 December 2007, Estonia is a part of the Schengen visa area.

Nationals of EU and EEA member states are free to enter Estonia. The required travel document for entry is a national ID card or passport.

Nationals of the following countries do not need visa to enter Estonia, and can stay for up to 90 days in any 6-month period: Andorra, Argentina, Australia, Brazil, Brunei, Canada, Chile, Costa Rica, Croatia, El Salvador, Guatemala, Holy See, Honduras, Hong Kong, Israel, Japan, Macao, Malaysia, Mexico, Monaco, New Zealand, Nicaragua, Panama, Paraguay, San Marino, Singapore, South

Korea, USA, Uruguay, Venezuela. The required travel document for entry is a valid passport.

Citizens of countries not mentioned above require a visa to enter Estonia. Visitors arriving in Estonia with visa must have national passports valid at least 3 months after their planned departure from Estonia.

Children aged 7 to 15 years must have their own passport when travelling to Estonia or, if they are registered in their parent's passport, must have their photo next to the name. Children under 7 years need not have a photo if they are registered in their parents' passports. Persons above 15 years must have a separate travel document with photo.

For detailed information on visa requirements and entry rules, please consult the Ministry of Foreign Affairs website at <a href="https://www.vm.ee/eng">www.vm.ee/eng</a>.

Regional airports are located in Kuressaare (Saaremaa), Kärdla (Hiiumaa), Pärnu and Tartu; these provide no regular international connections.

By ship: With over 6 million passengers annually, the Port of Tallinn is undoubtedly Estonia's main gateway. Large passenger ferries arrive from and depart for Helsinki and Stockholm regularly. The 85-km Tallinn-Helsinki line is served by ferries that make the journey in 2 hours; hydrofoils and catamarans make the trip on 1.5 hours and operate Between April to November or December, depending on weather conditions. Travellers should note that different ferry lines depart from different terminals and harbours. The City Port with its four terminals is a 10-15 minute walk from Tallinn Old Town; the Paldiski-Kapellskär line uses the Port of Paldiski, about 50 km from Tallinn.

**By car:** Border checkpoints greet travellers entering or departing the country by way of the Estonian-Latvian border points at Ikla (the Tallinn-Riga highway) and Valga, as well as on the Estonian-





## **Arrival**

**By plane:** Recently renovated, the Tallinn Lennart Meri Airport, just 3 km from the city centre, is welcoming, modern and user-friendly. Among other amenities, travellers have access to a free WiFi area in the transit zone. The airport's 24-hour customer service telephone is +372 6058 888.

The easiest way to get to town is by taxi. A tenminute ride to the city centre costs approximately 60 Estonian kroons. A hotel transfer minibus meets all incoming flights and takes visitors to downtown hotels for just 25 kroons ( $\Box$ 1.60 or \$1.90). City bus #2 connects between the airport, the centre and the harbour. The bus schedule is posted at the bus stops in these places, and tickets can be purchased from the driver (15 kroons,  $\Box$ 0.95 or \$1.16 per ride).

Russian border at Narva (the Tallinn-St. Petersburg highway), Luhamaa, Koidula and Murati. On the Estonian-Russian border, all traffic is subject to border formalities both when entering and leaving Estonia.

By bus: Not only is travel by bus the fastest and most convenient mode of international public transportation in the Baltic states, it also offers excellent value for your money. Regular connections service all major cities in the Baltic countries and St. Petersburg. Eurolines Lux Express offers comfortable Riga Airport transfers from Tallinn, Pärnu, Klaipeda, Vilnius, Panevezys, and Šiauliai. Prices start from 15.90. A useful tip: Regular passenger buses have priority at the border checkpoints, so travel is smooth. For more information and timetables, please contact Eurolines at tel. +372 6800 909 or visit their website at http://www.eurolines.ee/eng/index.html.

By train: There are only one international overnight train to Moscow. For further details see www.gorail.ee

## **Customs**

We suggest travellers consult with the Estonian Customs Board help desk (ph.: +372 880 0814 or www.customs.ee) for details. The limit on import of alcoholic beverages from outside the EU is one litre for beverages over 22% alcohol content, and two litres for beverages up to 22%, and four litres for wine. Import of tobacco and tobacco products from non-EU countries is limited to 40 cigarettes or 100 cigarillos or 50 cigars or 50 g of tobacco products. Counterfeit goods, including pirated CDs, video and audio tapes, are prohibited by law. A special export permit is required for specimens of plants and animals of endangered species, protected species and hunting trophies (please contact the Nature Conservation Department, Ministry of the Environment for details). Articles of cultural value produced in Estonia more than 50 years ago also require special permits (please contact the National Heritage Board).

are almost always available even immediately before departure (watch out for special events). For weekend travel or trips to more remote locations with fewer connections, it is advisable to buy tickets in advance. The Tallinn Bus Terminal is located at Lastekodu 46. The timetable is also available online at **www.bussireisid.ee/index.php** and ticket information is available at telephone +372 6800 900.

#### Travelling by car

Travellers hoping to see more of the country and the rural areas it would be best advised to travel by car. The roads are quite good and traffic is light. Crossing Estonia from north to south or west to east by car takes approximately three to four hours. All major car rental agencies have offices in Tallinn. It is also possible to rent the car in Estonia and drop it off at a rental agency in Latvia or Lithuania, or vice versa. The speed limit in rural areas is 90 km/h and in cities 50 km/h. In some areas the highway speed limit is increased during the summer months. Headlights and seatbelts (front and back) must be on at all times. Driving under the influence of alcohol or other intoxicating substances is punishable by law.

is no additional charge for ordering the taxi by phone, and it usually takes the cab just five to ten minutes to arrive. All taxi drivers must give you a receipt (in Estonian, ask for "Kvlitung, palun"). Locals usually give the exact fare and no tip. As in most major cities, some dishonest drivers attempt to overcharge unsuspecting passengers. If in doubt, note the taxi company and license plate number.

Public transportation: Tallinn has a public transport network of buses, trams and trolley-buses. Other Estonian towns have buses. Schedules are posted at bus stops. Tickets are available at newsstands (the yellow and blue "R-kiosks") and from the driver. A pre-purchased ticket (10 kroons, €0.83) must be validated upon boarding and is valid for one ride. A pre-purchased one-hour ticket costs 15 kroons and two-hour ticket 20 kroons. Check the time schedule for Tallinn bus lines for any bus stop at www.tallinn.ee/eng.









## Getting Around Estonia

# Inter-city public transportation

Public buses are the easiest, cheapest and most convenient solution for visiting Tartu, Pärnu or any other of the larger towns. Buses from Tallinn to Tartu depart every 15-30 minutes, to Pärnu every hour. On weekdays, seats to these destinations

# Local transport

**Taxis:** Taxis must clearly display their fares, driver's taxi service licenses, and a meter. The initial charge for entering a cab ranges from 20 to 45 kroons. Different taxi companies have different rates, but the average charge per kilometre is 7 kroons. In Tallinn, a short ride within the city centre usually costs around 50 kroons. A ride to the suburbs may cost about 100 kroons. There

# **Accommodations**

All major hotels in Tallinn have been newly built or completely renovation in recent years. Despite annual additions to the number of hotels and rooms, it can nonetheless be difficult to find a hotel room on short notice (particularly over the week-end). For the best selection, we urge visitors to Tallinn and the rest of Estonia to book hotel rooms in advance. For more details, see the Estonian Tourist Board website at www.visitestonia.ee.

# Money

The Estonian kroon is pegged to the euro (1 euro=15.6466 kroons; 1 kroon=100 cents).

Most larger hotels, stores and restaurants accept Visa, MasterCard, Eurocard, Diner's Club and American Express. However, it is advisable to carry some Estonian kroons with you.

Traveller's checks can be exchanged in most banks but are less likely to be accepted in shops. Eurocheque is the most widely accepted traveller's check, but American Express and Thomas Cook are also accepted. Banks are plentiful and easy to find in Tallinn. Most are open from 9:00 to 18:00 on weekdays, while some offices are also open on Saturday mornings. All banks offer currency exchange services. Exchange offices can also be found in larger hotels, the airport, harbour, railroad station and major shopping centres. ATMs are conveniently located around town; instructions are in English, Russian and Estonian.



# Telephones and Internet

The country code of Estonia is 372. Dial 00 for outbound international calls. Public payphones only accept prepaid phone cards, costing 50 and 100 EEK, which can be purchased at newsstands. As with ATMs, phone instructions are offered in English, Russian and Estonian. The GSM mobile phone system is available; please check compatibility with your operator.

Public Internet access points have been set up all over Estonia. They are located in local libraries and post offices. There are over 100 free wireless

Internet zones around the country, many of them in rather unexpected places - beaches, Old Town squares, stadiums, and concert halls.

# **Emergencies**

112 is the emergency number for ambulance, police and fire department. The police can also be reached directly at 110. Emergency numbers can be dialled free of charge and without a phone card from any public telephone. Select pharmacies are open 24-hours-a-day in many major towns. The one in Tallinn is located at 10 Pärnu Road (opposite the Estonian Drama Theatre); the one in Tartu is located in the Town Hall building (Town Hall Square).



# National Holidays

Estonians celebrate January 1 as New Year's Day, a rather slow and quiet day as people recover from the festivities. Shops open late and banks are closed. February 24, Independence Day, is celebrated with a parade of the Estonian Defence Forces at Vabaduse väljak (Freedom Square). May 1 is a bank holiday, similar to Good Friday and May Day. June 23 is the biggest holiday of the year as Estonians celebrate Midsummer Eve and the Victory Day in commemoration of the 1919 Battle of Võnnu, and June 24 is St. John's Day (Midsummer). August 20 is the Day of Restoration of Independence (1991). December 24 (Christmas Eve), December 25 (Christmas Day) and December 26 (Boxing Day) are usually spent at home with families.



## **Food**

Traditional Estonian cuisine consists of simple peasant food, such as cottage cheese, potatoes and bread, all of which are still important components of the local diet. The Estonian dark bread is the main staple missed by Estonians abroad. Typical Estonian dishes do not feature prominently on restaurant menus, and traditional home cooking is more likely to appear at small eateries in remote areas. Still, a few establishments have made Estonian specialities their niche; to sample Estonian cuisine, try the Kuldse Notsu Kõrts, Vanaema juures, Eesti Maja, Kaera-Jaan and Kolu Tavern (Open Air Museum) in Tallinn, and the highly recommended Lümanda söögimaja on the Island of Saaremaa.

Of meat dishes, pork is the favourite and most common in Estonia; Baltic herring is the most common local fish. A typical, heavy Estonian meal is a pork steak with sauerkraut and potatoes. Soups are also a mainstay in the local diet, with tasty samplings ranging from broth with dumplings and meatballs to delectable vegetable purees.

At local restaurants, appetizer prices start at approximately 50 kroons and main courses start from about 100 kroons. A three-course restaurant meal with coffee will usually cost upwards of 250 kroons. A glass of house wine or beer is usually 40-50 kroons. Cafeterias offer main course for 45-60 kroons and 100 kroons will buy a full meal. Pleased customers usually leave a tip of 10% of the bill.



phenomenal sales, while Coke was not selling up to expectations. It was then that Coca-Cola decided to broaden its horizons by buying one of the local kali trademarks in order to make a profit on the stubborn Estonians.

to local and resident DJs, clubs frequently present guest performers from London, the US and other club hubs. For those looking for a more mellow hight on the town, Tallinn's street are brimming with pubs, vinoteks and bar-restaurants, many of



## **Drinks**

The main drinks in Estonia are beer, wine and vodka. While many young city residents opt for beer or wine, the older generation and rural folk tend to prefer vodka. In the 1930s Estonian vodka made it into the Guinness Book of Records as the strongest vodka in the world (96°). Local brands of beer enjoy a very strong market position in Estonia. The two main breweries are Saku and A. Le Coq. Saku is Tallinn-based, and its corporate colour is navy blue while A.Le Coq is brewed in Tartu and its colour is red. There are also many smaller breweries. A full list of Estonian beers is posted at www.BeerGuide.ee. One glass of beer at bars or restaurants costs 30-60 kroons. A bottle of beer sells at supermarkets for 10 kroons.

Spirits also include some traditional liqueurs. The famous Vana Tallinn (Old Tallinn) has a 45° alcohol content, and is coincidentally made from 45 ingredients - the recipe is known only to a handful of people. Indeed, the legendary 19th-century *kristallkümmel* (caraway liqueur) has made its long-awaited comeback.

Estonian wines, made from currants or other local berries, are rather sweet. Wine lovers usually prefer imported wine, of which there is an ever-increasing selection at stores and vinoteks. A very popular and refreshing non-alcoholic drink is *kali*, made of bread, malt, rye or oats flour and yeast; it has a characteristically dark brown colour. It was with this drink that the Estonians forced the Coca-Cola company into submission, or at least into a business deal. *Kali* was enjoying

## **Entertainment**

The entertainment scene in Estonia is vibrant year-round, providing visitors and locals alike with a long list to choose from. Concerts, festivals theatre, street raves, DJ competitions - Estonia has it all. It is not by chance that both Tallinn and Tartu have their own opera and ballet theatre. Tickets are an excellent value for the money; concert tickets start around 150 kroons, and best seats at the opera are yours for as little as 390 kroons. For more information on the concert schedule see www.concert.ee; the programme for the national opera is posted at www.opera.ee. Tickets can be bought at the box offices or via ticket agencies located in all larger supermarkets, or via Internet (www. piletilevi.ee)

Even the most sceptical museum-goer is bound to find something intriguing in Estonia's large selection of museums, which feature everything from history, art, photography to toys, chocolate, musical instruments, even wax figures and many other topics. Most museums are closed on Tuesdays and many on Mondays as well. It is advisable to have cash on hand as many museums do not accept credit cards.

Tallinn is also bustling well into the night with booming and blooming club scene. Clubs are usually open and packed with energised vibes from Thursday to Sunday, with Friday and Saturday drawing the liveliest of crowds. In addition



which offer live music even on weekdays. Rather take in a movie? Films in cinemas are shown in the original language with subtitles.

# **Shops**

Souvenir shops in Tallinn and most other tourist locations are open seven days a week, 10:00-18:00 or 19:00. Big supermarkets and hypermarkets are open seven days a week from 9:00-21:00 or 10:00-22:00. Department stores close a few hours earlier on Sundays or, in smaller towns, may be closed on Sundays. Smaller food shops may have shorter opening hours. Some 24-hour shops can be found as well. Other shops usually open at 9:00 or 10:00 and close at 18:00 or 19:00; they often close early on Saturdays and are closed on Sundays. The majority of shops accept credit cards, with the exception of smaller stores and stores in rural areas.



# **Souvenirs**

Souvenir and shopping preferences vary hugely but there are certain souvenir gifts that have gladdened many a heart. Estonian handicraft comes in many forms. There are woollen sweaters and mittens with local ethnic patterns, linen sheets and tablecloths, crocheted shawls and veils, colourful woven rugs, handmade jewellery and glassware, baskets, and an array of wooden spoons and butterknives made from juniper. Fine and applied art for show and purchase is on display at art galleries around the country, featuring graphics, glass, ceramics, hand-painted silk scarves and leatherwork. Various herbal teas from wild plants are available at pharmacies. Local honey - pure or flavoured, e.g. ginger, is another delicious treat. In rural areas, you may find handmilled flour. And those who keep coming back swear by the Estonian black rye bread. To bring home local spirits, popular choices include Vana Tallinn or kristallkümmel liqueur or local beer. And there is no place better than Estonia to buy Estonian music.



## **Crime**

Although common sense is advisable in all destinations, Estonia gives no particular reason to be excessively worried. Do not walk the unlit and abandoned areas alone at night. Do not leave bags or items of value in the car, as not to tempt car thieves or robbers. Pickpockets may operate at crowded tourist destinations in Tallinn, so make sure your wallet and documents are stored



Estonians are typical Nordic people - they are reserved, not too talkative and speak rather monotonously, with very little intonation. All this may give one the impression of coldness bordering on rudeness. But rest assured, this is not the case, and the speaker may actually be extremely well-meaning, even excited. There are several well-known Estonian sayings, such as "Think first, then speak", "Weigh everything carefully nine times before making a move", and "Talking is sil-



## Language

Estonian is not widely spoken in the world, so Estonians do not expect short-term visitors to master the local language. Still, local people are thrilled and pleased to hear a foreigner say "Tere!" (Hi!) or "Aitäh (Thank you) in Estonian. Knowledge of foreign languages is naturally a must for hotel staff and numerous other professions in the service sector. Many people are fluent in English, particularly the younger urban generation, and a great number of people also speak Finnish, due to Finnish TV, Finland's close proximity to Estonia and the great number of Finnish tourists. German is less widely spoken in Estonia, although previous generations have often studied German, not English, at school. Russian-language use has dropped to a point where older people no longer speak the language well and the younger generation have already chosen other languages to learn at school. Studying French has become more popular over the last few years but the number of people who speak French is still guite small. An English-Estonian dictionary is available online at www.ibs.ee/dict.

ver, silence is gold". It is, therefore, no wonder that the people are not very good at small talk, do not waste too much time on grand introductions, and usually come straight to the point. This is why Estonians' English may sometimes sound shockingly direct. There is, however, often a subtle irony involved in Estonians' utterances - delivered with a serious face and just the slightest twinkle of the

Estonians are relatively individualistic. There is a saying that five Estonians mean six parties. Even though people agree on the final objective, they insist on reaching it in their own ways. Estonians also value their privacy. In the old days, it was said that the neighbour's house was close enough if you could see the smoke from the chimney. Modern, tight-packed urbanites flock to remote countryside on the weekends to enjoy more space and

Even though guests at birthday parties and concerts are rather guiet and subdued in the onset, they warm up eventually and turn into a direct opposite of their day-character, as you are likely to see in Tallinn's clubs.