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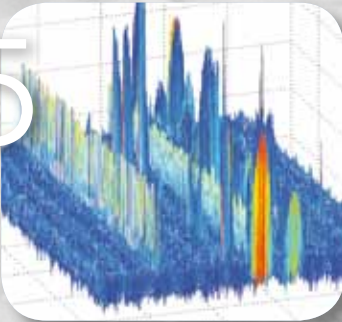
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/K/ Embedded Java Solutions in set-top box project for elderly

/k/ Embedded Java Solutions is to supply the Java technology for a project to provide social and medical support to elderly people living independently in the region of Vercors, France.

/K/'s Mika VM will run on set-top boxes using ST Microelectronics' ST 7100 chipset, in conjunction with the Knopflerfish OSGi framework and middleware and applications provided by local partner SIRLAN Technologies.

/k/ Embedded Java Solutions

Putting Java where it wants to be

"Vercors is a mountainous, rural area" explains SIRLAN's Olivier Gandit. "So for example you cannot assume that everyone has access to DSL or cable TV, so we use GPRS for communication with the server - and that means you have to pay careful attention to the traffic you create. It's also important that the system is easy to install and that it can be managed remotely - otherwise you end up in a situation where you have one skilled person who can drive to maybe 3

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continuation from page 1

/K/ Embedded Java Solutions in set-top box project for elderly

/k/ Embedded Java Solutions

Putting Java where it wants to be

or 4 homes a day, and that becomes the limiting factor in your deployment."

"The user interface was another important issue. Our middleware suite supports a web-based interface and industrial LCD panel displays, but many elderly people do not own or want a computer and a panel display adds to the cost and complexity of the installation. So we developed an interface using the on-screen display (OSD) of a television set-top box, with the remote control as input device. At the push of a button the user is presented with a menu of services such as appointments diary, medication schedule, vital telephone numbers ... but also for example a photo album to which their children or grandchildren can upload pictures, messaging via SMS, etc..

Since we are using the built-in OSD facilities the presentation is very clear and legible, which wouldn't necessarily be the case if we'd used technology ported from the computer desktop."

"In fact each of these menu items rep-

resents a software service in the OSGi sense of the word, and the menu screen is an OSGi service browser. Using our middleware the social or medical services can select which services are required by a given client, and then these are automatically pushed to the client's set-top box. When the service is installed it automatically appears in the top-level menu, in real-time. Services can be installed, removed, or updated without requiring a system restart."

"This is where we come in" continues /k/ founder Chris Gray. "SIRLAN had already used our Mika VM in a building automation project running on an ARM9 system-on-chip, and they were very happy with both the VM and the support we provided. So they asked us to port Mika to the SH4 architecture, which we did without much difficulty - Mika is highly portable to just about any 32-bit architecture with a gcc-based tool chain.

For this project the set-top box will be running Linux, but with some more effort it should be possible to run Mika on one of the specialized operating systems used in set-top boxes - in principle it's just a matter of mapping our internal abstraction layers onto the memory management, networking, filesystem, etc. of the underlying OS."

"The combination Mika + Knopflerfish is now in use in several projects, and we have a joint marketing agreement with MakeWave (the maintainers of Knopflerfish) under which customers who purchase both their and our value-added products get a discount.

For this project SIRLAN are using our Mika Max product which builds on the open-source Mika code base by adding performance enhancements, secure communications, etc..."

"The pilot study which begins this autumn will be with 100 homes, but if it proves successful it will be extended throughout the region and we hope in other regions also. Looking further, SIRLAN's middleware platform is capable of much wider application - originally developed for building automation, it provides a complete service delivery chain from the back office to the residential gateway or mobile device. With Mika as the VM, the system requirements at the point of delivery are very reasonable in terms of storage capacity and processor speed - in fact often an existing consumer product can be adapted for the purpose, as this project illustrates. We are helping SIRLAN market this platform, and interested product designers should contact us for product and licensing information". ■

Preface A European Network of Networks

In the past months, DSP Valley has organized some very successful brokerage events with other European clusters. Together with the UK-based Electronics Knowledge Transfer Network (E-KTN), DSP Valley has set up a 2-day B2B matchmaking event, spread over Cambridge and Edinburgh (see article on page 7). Despite the tough economic situation, first feedback from the DSP Valley participants indicates that almost each of them could return home from the UK with at least 3 or 4 concrete business opportunities with newly discovered British

partners. This activity with DSP Valley and E-KTN was prepared with financial support from the European project Innovation Express, aiming at stimulating cross-boarder innovation activities for SMEs, by networking, technology transfer, workshops to prepare for RDI-projects etc.

A few weeks later, SMEs from the DSP Valley network could participate in another brokerage event that was organized together with the French pôle de compétitivité System@tic and the Dutch pole of innovation Point

One. The aim of this workshop was to initiate Eurostars projects: Eurostars is a European program specifically promoting international cooperation for high tech SMEs. Although today it is not yet clear how many new Eurostars project proposals will result from this brokerage event, we already had the feedback from the participants that they have discovered cooperation opportunities and new potential innovation partners.

For DSP Valley, it is clear that building a European network of networks is a very important cornerstone for accessing (an

Personalized Citytrip Planner for the Flemish Art Cities is unique in the World

Planning a city trip requires a lot of preparation: gather touristic information, selecting the most appropriate attractions and events, determining the best sequence of visiting taking into account opening hours and locations, etc. This is often a difficult and time consuming task. The 'Citytrip Planner' simplifies this process.

On July, 7, the Flemish "Art cities" (Antwerp, Bruges, Ghent, Leuven en Mechelen), together with the Centre for Industrial Management of the Katholieke Universiteit Leuven, the research unit IT of KaHo Sint-Lieven Ghent and the company RouteYou from Ghent, launched the 'Citytrip Planner'. This unique web site presents a personal city trip, fast and efficiently.

How does it work?

First, you enter some trip data (date of the trip, number of days, starting and ending point, start and end time, etc.) and you answer some short questions to determine your interest profile. The Citytrip Planner immediately proposes a trip taking into account your interests, the trip data and the attraction opening hours. The attractions that were selected automatically and the route between them are shown on a map. Short descriptions and pictures of each attraction can be consulted as well. Furthermore, a list of attractions matching your profile but not selected in the trip is presented. You can change the proposed trip and then, using the RouteYou software, print the trip or download it on your own mobile device.

Unique in the World

Apart from the Flemish art cities, no other city in the World has a web site that supports tourists to this extend in composing their city trip. This innovative web application resulted from the cooperation between the Centre for Industrial Management of the Katholieke Universiteit Leuven and the research unit IT of KaHo Sint-Lieven Ghent. Researchers Wouter Souffriau, Pieter



Vansteenwegen en Joris Vertommen developed the mathematical algorithms and translated them into a real-life application, the Citytrip Planner.

Pilot project

In October 2008, the city of Leuven launched a pilot version of the Citytrip Planner. After many positive reactions, the Flemish art cities decided to develop the site for all art cities in the framework of the Flemish Art Cities Action Plan. This innovative web site does not only facilitate to plan a city trip, it also brings technological exposure. Furthermore, the Citytrip Planner makes it easier to discover "hidden places" in a city, leading to a better exposure of the cultural heritage.

This website is a must for anyone planning a city trip in one or more of the Flemish art cities!

The Citytrip Planner is available via the touristic web sites of the cities or via www.citytripplanner.com.



important part of) the global market. Especially for SMEs, the network of networks can give a tremendous help in finding the right partners for a new innovation project, and it significantly lowers the threshold for international cooperation. DSP Valley is strongly determined to play a forerunners role in the process of building this network of networks, not for DSP Valley on its own, but to the benefit of its members, and to offer them the possibility to find new international innovation opportunities.

DSP Valley is convinced that, by being

a participant in the networking of networks, high tech companies and SMEs in particular, will be better positioned to cope with the challenges of the actual economic situation, and to prepare for an even stronger future.

On behalf of the DSP Valley network and its members, I invite other clusters and networking organizations, active in the domain of embedded systems development or micro/nano-electronics systems design, to contact us and to join our initiative to build this European network of networks.

Looking forward to hearing from other European clusters and networks in the embedded space !

Peter Simkens
Managing Director
DSP Valley



NXP Leuven deploys the first practical field test of road user charging in The Netherlands



In Eindhoven, NXP and IBM have started a life field operational test on June 25th to help implement fair taxing for all private cars and to address the challenge of traffic congestion. This test demonstrates the feasibility of a new road user charging system based upon GPS and GPRS, addressing the needs for a high volume deployment to all private cars, such as easy installation, ease of use, secure and accurate fee calculation and guaranteed payment transaction.

In the future you will not be charged for car ownership, but for car use. The new system calculates a tax fee based on road type, time period, trip length and the environmental characteristics of the car.

The on-board unit (OBU) can be attached to the windscreen using a suction cup. The sticker is vehicle-specific and has to be glued on the wind screen. It breaks if removed. The on Board unit checks the vicinity of the sticker to ensure its presence in the car. If it does not detect the sticker, it will report this into the system, indicating that the driver tries to make

a free ride by leaving the OBU at home. The sticker enables a very quick and secure self installation. In addition, the sticker is used for fast (police) enforcement checks.

This test is carried out with the first release of NXP's Automotive Telematics On-board unit Platform 'ATOP', a single component solution for Road pricing capable On Board Units (OBU) or for in car telematics functions such as eCall. ATOP is conceived by NXP's R&D facility in Leuven.

NXP and IBM have asked 50 people of their staff, located at the high tech campus Eindhoven, to drive for 6 months with an ATOP based OBU in their car. The OBU indicates the street name, the current price/km, the accumulated trip price and the status of the monthly invoice on its display. In a second phase, drivers can chose the option for other travelling hours, or other routes, to avoid congestion and to obtain a lower price. People following these options will be rewarded. The test has the objective to

test the technology and to make people aware that changed driving behavior leads to lower cost in the future.

The project is carried out with subsidy and in very close cooperation with 'Beter Bereikbaar Zuidoost-Brabant', 'Samenwerkingsverband Regio Eindhoven', the ministry 'Verkeer en Waterstaat' and the province Noord-Brabant in the Netherlands.



Mr van Merrienboer, alderman of Eindhoven, installs and activates the first ATOP based OBU in his car in 17 seconds.

The Eindhoven test will be followed up by a test in Leuven, Belgium, currently in definition phase.

Volume introduction is planned by the Dutch government in 2011 for lorry traffic and as of 2012 to 2016 for private passenger cars. Belgium and France have announced a likely system for trucks in 2011-2012. ■



Jos Corstjens of tbp electronics wins the European Quality Leader Award 2009



tbp electronics announced that its Director of Industrialization & Co-engineering, SHEQ, Jos Corstjens, has been awarded the European Organization for Quality's (EOQ) prestigious European Quality Leader Award 2009. The EOQ President, Viktor Seitschek, presented Mr. Corstjens with the prize at the 53rd EOQ conference in Dubrovnik, Croatia. The European Quality Leader Award is in

recognition of the outstanding individuals who devote their time, energy and knowledge in sharing their beliefs to the benefit of the European Society. "This year, we nominated Jos Corstjens for the award due to his unique experience in quality and entrepreneurship within a small and medium sized enterprise (SME), and his ability to implement quality systems with creativity tools and innovative methods,

all of which are in line with the EOQ's views that the human factor should make a difference on all quality actions," commented Viktor Seitschek, EOQ President and member of the jury of the European Quality Leader Award 2009.

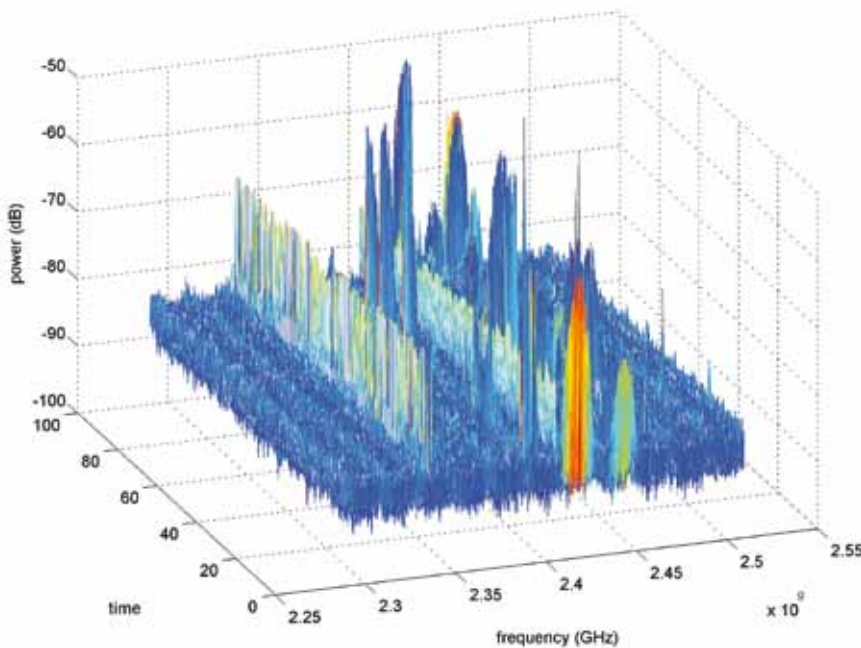
On receiving the prize, Mr. Corstjens commented: "Since joining tbp electronics, my goal has been to implement efficient



IMEC demonstrates first spectrum sensing capabilities for cognitive radios

IMEC has demonstrated spectrum sensing functions, using an experimental setup including its integrated reconfigurable radio platform. The setup senses information on spectrum occupancy from UMTS and WLAN signals in specific bands. It retrieves information on the frequency and bandwidth, with esti-

mates for power and noise. The system includes IMEC's advanced ASICs implementing a programmable baseband platform and a flexible RF transceiver front-end. This transceiver offers the possibility to scan from 100MHz to 6GHz.



First experimental spectrum sensing solutions runs on IMEC's software-defined radio prototype. It retrieves information on the frequency and bandwidth, with estimates for power and noise.

IMEC's achievement comes in time to profit from the recent worldwide switch from analog to digital terrestrial TV. This switch frees a large portion of valuable spectrum, and is therefore often named the digital dividend. Opportunistic wireless devices will be able to operate in these white spaces, the former TV broadcast channels. Such TV Band Devices (TVBD) will include the ability to detect the primary users of frequency bands, thus allowing the secondary use of the band without interfering with the primary users.

A key driver for the future success of small and portable TVBDs will be an efficient and low-power sensing technology. IMEC is now working to further develop a flexible, cost-friendly, and energy-efficient engine for spectrum sensing. ■

and simple corporate processes and quality procedures. Besides that, we created support from within the organization by allowing people to actively participate in improving the processes and procedures. The result can be seen in the quality driven spirit of the workforce and is, no doubt, the largest gain for tbp. This award is an important recognition of the success of this implementation, not only for me, but for all employees at tbp."

Ton Plooy, CEO of tbp electronics, added: "Jos Corstjens' vision and persistence is an important asset in building our cus-



**Dr. Eric Janssens, Director General, EOQ
Jos Corstjens, Director of Industrialization & Co-engineering, SHEQ, tbp electronics
Viktor Seitschek, President, EOQ**

tomer focused and quality driven organization. Jos has proven that he is not only able to generate innovative ideas but, more importantly, that he is able to put these ideas into practice and manage the

About tbp electronics

tbp electronics is an Electronics Manufacturing Services company with offices in Dirksland, the Netherlands and Geel, Belgium. tbp offers its customers a complete portfolio of services that include: design for manufacturing and test, product development, PCB assembly, test, inspection, product- and cabinet building, and repair and logistics services.

changes required at every level within the organization. Our high level of quality is a key determining factor when customers choose tbp electronics." ■

NXP Semiconductors Adopts Target's IP Programmer Tool-Suite for Next-Generation Automotive RISC Processor

Target Compiler Technologies, the leader in application-specific processor (ASIP) design tools, announced that NXP Semiconductors has adopted Target's IP Programmer tool-suite as the software development kit (SDK) for NXP's next generation 16-bit ultra-low power RISC.

MRK III was designed by NXP for remote entry and security applications in the automotive industry, such as keyless access and immobilization. While previous-generation processors in the MRK family were typically programmed in low-level assembly code, C programmability was a key requirement for MRK III. The IP Programmer SDK with its optimizing C compiler will be used by MRK III software developers, both at NXP and at NXP's customers.

Volker Graeger, General Manager of NXP's automotive and identification development centre in Gratkorn, Austria commented: *"NXP provides comprehensive solutions for passive entry and keyless ignition systems, for the highest levels of security and convenience in car access. With Target's IP Programmer SDK, our customers can program our latest automotive microprocessor in C in a cost effective way, generating denser code in a much shorter time and with more flexibility than in assembly language. With IP Programmer, development of applications will be more efficient and time-to-market will be significantly reduced."*

Gert Goossens, Target's CEO, comments: *"We are very happy to engage once more with NXP Semiconductors. In a very short time we could show value added to their 16 bit ultra low power microprocessor. First, the nML modeling capabilities of our IP Designer tool-suite for ASIP design were used to generate and validate a complete set of proven software development tools targeted toward the unique capabilities of the MRK III processor. Then, with IP Programmer an MRK III-specific*

SDK was derived instantaneously, and is now available to NXP's customers. We look forward to support NXP and their customers as they realize exciting new products for the automotive market."

Target's IP Programmer provides a comprehensive SDK for ASIPs such as the MRK III. The SDK includes an ISO C99 compliant, highly optimizing C-compiler, an assembler, a linker, an instruction-set simulator, and a JTAG-based on-chip debugger.

MRK III utilizes a Harvard architecture featuring a 16 bit ALU. The instruction set supports 8 bit and 16 bit operations and is optimized for C programming. Due to the efficient 2-stage pipeline with a separate fetch and execute unit most instructions execute in a single machine cycle. The device provides 64 kByte of linear data address space and 128 kByte linear code address space, powerful addressing modes and high code density. Moreover, the device supports code/data protection mechanisms (System/User mode) and an efficient idle mode concept to reduce the power consumption. ■



About NXP Semiconductors

NXP is a leading semiconductor company founded by Philips more than 50 years ago. Headquartered in Europe, the company has about 28,000 employees working in more than 30 countries and posted sales of USD 5.4 billion (including the Mobile & Personal business) in 2008. NXP creates semiconductors, system solutions and software that deliver better sensory experiences in TVs, set-top boxes, identification applications, mobile phones, cars and a wide range of other electronic devices.

About Target Compiler Technologies

Target Compiler Technologies is the leading provider of retargetable software tools to accelerate the design, programming and verification of application-specific processor cores (ASIPs). Target's IP Designer tool suite has been applied by customers worldwide for diverse application domains, including GSM, WCDMA and HSDPA handsets, VoIP, audio coding, automotive infotainment, ADSL and VDSL modems, wireless LAN, hearing instruments, image processing, video processing, and various control and interfacing applications. Target is a spin-off of the Belgian nano-electronics R&D center IMEC, is headquartered in Leuven, Belgium, with North American operations in Boulder, Colorado.

DSP Valley Meets Electronics-KTN

This activity was part of the INNET Innovation Express project that is supported by the Flemish Public Authority IWT¹



On June 10th and 11th DSP Valley and Electronics Knowledge Transfer Network (E-KTN) held their first cross channel B2B brokerage event in Cambridge and Edinburgh.

The event brought together 79 delegates from both clusters in the Benelux and the UK, in microelectronics and embedded systems for a series of one-on-one partnering meetings.

Throughout the brokerage event the 79 delegates of both network associations held an impressive number of 291 one-on-one meetings, according to all participants a very efficient way of prospecting new partnerships.



egation (smartly) decided to skip the drinks, given the number of scheduled meetings our next day would require a fresh head... The DSP Valley delegation, with AnSem, Easics, ICsense, IMEC, Lysitech, Mephisto Design Automation, NXP Semiconductors, Q-Star Test, Target Compiler Technologies, tbp and Verum was ready !

And indeed July the 10th was a very, very busy day. In an ambience of old airplanes we started at the Duxford Imperial War museum around 10 o'clock for a round of 177 intensive one-on-one meetings. The DSP Valley delegation had the opportunity to meet with world-class companies including Arm, CSR, Astrium, British Aerospace, but also with local high-tech SMEs like XJTAG, AND, Oxford Digital,... The day was rounded off with a finger buffet offering delicious risotto and many other dishes. Then we "coached" again to London Stansted

It was Tuesday, July 9th 13H30 when the first members of DSP Valley gathered at the Eurostar train station in Brussels. The early birds decided to get a cop of coffee, one for the road ahead. The delegation arrived perfectly on time, WAW what an incredible smooth start for our journey. We boarded with 14 delegates of DSP Valley to meet our E-KTN colleagues at the other side of the channel (in this case a water channel). We arrived ahead of schedule and even managed (running) to get an earlier train to London Stansted. Due to the last minute boarding we all had to stand in the train feeling like most London forensic people do, I guess. The train needed an hour to get to Stansted (ouch my feet) but there we were welcomed by the smiling Ashley Evans from E-KTN; a blink of an eye later we were already picked-up by an E-KTN organized coach which brought us to the hotel.



After a short check-in procedure we took off to Anglesey Abbey close to Cambridge for the evening dinner and a prior visit to the beautiful Anglesey Abbey Museum. By the way, at Anglesey Abbey we also found the underlying organizing "secret force" of E-KTN: an always friendly and helpful Samara Dawson. After the networking dinner the DSP Valley del-

airport and took our flight to Edinburgh for a second round of intensive meetings.

The next morning some of us prepared for the day by having a Scottish specialty called Haggis² for breakfast. It tasted far better than one would think. The meeting in Edinburgh was kindly hosted by

¹IWT: Instituut voor de aanmoediging van innovatie door Wetenschap & Technologie in Vlaanderen (Contract IWT 080457)

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Wolfson where on Thursday July 11th again 114 intensive one-on-one meetings were held. Besides Wolfson, also 3L, ATEEDA, Epson, Freescale, Jabil, Keithley Instruments, KPIT Infosystems, Mentor Graphics, SLI, SFX Technologies, Spiral Gateway, Steepest Ascent, University of Strathclyde and the University of Oxford participated from Scottish side. Some participants came even from different regions like Proekspert from Estonia and SiWays Microelectronics from India. The productive day was concluded with a networking reception at the roof of the National Museum of Scotland with a magnificent view over Edinburgh and its castle. Then we enjoyed a well deserved

dinner³ for all the delivered hard work and (inevitably) visited a Scottish pub where we closed the day by tasting some fine Scottish whiskey.

The return trip by plane from Edinburgh to Brussels was much simpler than the journey by train to Cambridge via London and Stansted. Only one point of attention for any future trips: risk management! Since our 14-people delegation included 8 CEO's from Leuven based high-tech companies, we should maybe decide to split the group over 2 planes...

Early results/feedback:

The format of one-on-one dedicated time slots allowing the exploration of complementarities or synergies with other companies in the same technology domain (on technical and business level) was highly appreciated by the company representatives. Since the companies themselves could indicate with which company they wanted a meeting (in this case via a new web based scheduling system) this resulted in a high percentage of relevant meetings, unlike the more familiar speed dating which is targeting the "lucky shot" out of a large number of random meetings. Maybe this explains why most of the DSP participants indicated already at the event that they had on average at least 3-4 concrete business opportunities which are likely to generate future cooperation with E-KTN members. Consequently the opinion of the participants at both sides indicated that the initiative was a huge success, no wonder that the most heard feedback was "please, more of this type events"!

And that is exactly what we are working on... 😊

²Haggis: There are many recipes, most of which have in common the following ingredients: sheep 's 'pluck' (heart, liver and lungs), minced with onion, oatmeal, suet, spices, and salt, mixed with stock, and traditionally boiled in the animal's stomach for approximately three hours.

³Dinner: Co-sponsored by Flanders Investment and Trade (FIT)

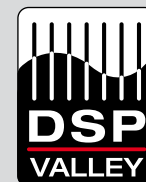
Business-to-business forum DSP Valley

DSP Valley has a yearly tradition of a B2B forum for individual companies, that has been extended with international cluster matchmaking events, such as the event with the E-KTN described in the previous article. This year our own B2B forum will take place on Tuesday October 20th, 2009 in Leuven, Belgium, and it will be open to all companies interested in the focus of the forum, that are looking for cooperation in the region.

The technology focus of this B2B Forum is: "Design of embedded technology and systems for signal processing". Technologies within this scope include image processing, sound processing, communication and navigation. The development of these technologies cov-

ers as well the (micro-electronics) hardware as the (embedded) software, as well digital as analog and mixed-signal as sensor-technologies.

The scope of this B2B Forum is to give you the opportunity to explore new com-



petencies with potential partners in face-to-face meetings with organizations chosen by yourself, and also to better indicate your own technologies in order to create new co-operations.

More information is available on the DSP Valley website. If you're interested in participating in this event, you can send a mail to vera.geboers@dspvalley.com and you will be kept up-to-date on the practical information.



Exploring GUI design for embedded systems



exploring the information society

On Wednesday, June 10, 2009, DSP valley and IBBT organized a technical seminar at the premises of IBBT in Ghent, Belgium. Subject of the seminar was "Exploring GUI design for embedded systems". More than 80 people from almost 50 different organizations registered for this seminar in which academic and industrial experts gave their view on the theme or elaborated on technological challenges. Before the break two academic presentations and one industrial use case filled up the program. After the break four different frameworks, open source and proprietary, were briefly presented with slides and some live demos.

The first speaker of the seminar was David Geerts from the Centre for User Experience Research (CUO) at the KU Leuven. According to ISO 9241-11 usability is defined as *"The extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use."* He showed some of the challenges this poses for embedded systems and how a user-centered design helps to tackle these challenges. A case study in designing a usable interface for a set-top box was presented.

The second presentation was given by Jo Vermeulen and Jan Meskens, both researchers from the EDM department of the University of Hasselt. They gave an overview of the User Interface Markup Language (UIML) and how it helps designers to create user interfaces for multiple devices. They built a platform independent GUI builder named Gummy, as part of their research work, and demonstrated some early results and how it helps to solve problems in mobile UI design. With Gummy you design the GUIs graphically and these are exported to different platforms in a UIML format.

The last presentation before the break was given by Njin-Zu Chen from Philips Applied Technologies. He illustrated a case study of building the different GUIs for a combined HD-DVD recorder. He shared some lessons learned with the participants and showed pro-and-contra for different scenarios. Creating a Domain Specific Language for this product family was one of the activities that proved to be very useful.

During coffee break - or in parallel with the presentations - representatives of five companies and the DSP Valley advisory service, ADVIES, were eager to discuss the advantages of their technology and the value of their development.

After the coffee break Bart Cerneels from Essensium/Mind gave a live presentation about the possibilities of the Qt framework. Qt pronounced as 'cute' is developed in C++ in an open source project that is available under different license models. It is multiplatform and it is already used in a number of common applications like Google Earth and Skype but also in commercial products. Future features comprise multitouch, gestures, OpenVG and 3D enablers.

In the second presentation after the break Aad van Gerwen from TASK24 presented briefly the Adobe Flash Light framework and its features. Adobe Flash Lite is a software runtime engine for mobile and CE devices based on Adobe Flash technology. The latest version supports Flash enabled websites, plays Flash video supporting several codecs. A shorter startup time, reduced memory consumption during runtime and better execution times for the rendering and the scripting have led to an improved performance of the player. The Flash player architecture consists of a Flash Lite Core library and a Host Platform Implementation. The communication between the two happens via the API of the Flash Interface and the System Interface. TASK24 is member of the Adobe partnership program which



includes that they can port the player to the needs of the embedded platform.

Koen Deforche presented the Wt, C++ web toolkit which was developed by his company Emweb. He started his talk to prove that embedded systems can benefit from web interfaces. A web browser is universal, easy to use and it has become very capable. The web interface enables remote operation if your product is connected to the WWW. Wt helps to ease the web development pain. It is a UI library with an API comparable to Qt and it includes over 190 classes but Wt is also an application server that can handle multiple sessions. It includes an HTTP(S) server but with differing features from a typical web framework. Small memory footprint, high performance and direct access to hardware or low level C libraries are some of the key benefits.

The last presentation was given by Udo Nülle from Express Logic who presented the PEG™ (Portable Embedded Graphics) family of GUI development tools from their partner Swellsoft. With the full WYSIWIG WindowBuilder it is easy to design a GUI that fits a deeply embedded system with very small footprint as well as an embedded system with bigger resources. The speaker showed the capabilities of the embedded graphics package and the related development tools.

If you missed the opportunity to be there but you would like to know more about the presentations please contact Filip Vincent. ■

Belgian Eclipse User Group Meeting

<http://www.sigasi.com/news>

**Sigasi, Ghent, Belgium
September 1, 2009**

The Belgian Eclipse User Group is proud to present you the program of its next meeting on Tuesday September 1st 2009 at 18H.

We invited some interesting Eclipse speakers: Jan Van de Poel from IBM will present us an overview of the JAZZ development framework and Ralph Müller from the Eclipse Foundation will talk about the Eclipse ecosystem across Europe.



The goal of the Belgian Eclipse User Group is to unite everybody in Belgium who builds a product based on Eclipse technology, or who uses Eclipse as their main IDE. Feel free to forward this information to friends/colleagues who might also be interested.

This time we will meet at Sigasi, Parkoffice, F. Rooseveltlaan 348, 9000 Gent (<http://www.sigasi.com/route>).

Attendance is free, but registration is required and the number of participants is limited (hendrik.eeckhaut@sigasi.com)

The program for next meeting:

18:00 reception (sandwiches and drinks)

18:30 Hendrik Eeckhaut (Sigasi): introduction + high quality software assurance for small teams

19:00 Jan Van de Poel (IBM) : Jazz

19:45 Ralph Müller: The eclipse foundation

20:30 networking

Academia-to-Business Forum (A2B)



<http://www.dspvalley.com>

**Brabant, Leuven, Belgium
September 24, 2009**

On September 24th, 2009 DSP Valley and IMEC will organize a forum where research institutes, universities and university colleges will present research projects to the industry. The focus of the projects is on hardware and embedded software related topics.

The goal of this half-day forum is two-fold. On the one hand, the academic partners will present the research project to a broad audience and in that way

they have the opportunity to extend the user committee of the project and they can exchange ideas for new projects. On the other hand, companies will get an overview of the research projects on embedded technology in the DSP Valley activity region and they will be able to get first-hand information of the specific projects.

After the presentations there will be opportunity to have private discussions with the researchers.

During the whole event there will be a "Café Embarqué" where the visitors

can visit the demos and poster booths. We will provide time and opportunity to network with the different participants and presenters to allow discussions on details.

The complete program details will soon become available on our website: <http://www.dspvalley.com>

The presentations will be given in English.

For more information please contact Filiep Vincent (filiep.vincent@dspvalley.com) or +32 16 24 14 43)

Advanced Concepts for Intelligent Vision Systems - Acivs 2009 <http://acivs.org/acivs2009/>

**Organized by the SEE
Mercure Chateau Chartrons,
Bordeaux, France
September 28 - October 2, 2009**



Acivs 2009 is a conference focusing on techniques for building adaptive, intel-

ligent, safe and secure imaging systems. Acivs 2009 consists of four days of lecture sessions, both regular and invited presentations, poster sessions and a special session on performance assessment of vision systems.

The conference fee includes the social program (conference dinner, opening reception, and cultural activities), coffee breaks, daily lunches and a hard-copy of the proceedings. Students, IEEE and SEE members can register at a reduced fee.

Model Driven versus Test Driven Development for embedded software

<http://www.dspvalley.com>



**Fontys Hogescholen, Eindhoven,
The Netherlands
September 30, 2009**

On September 30th, 2009 DSP Valley and the Fontys Hogescholen will organize a seminar that gives an overview of two paradigms for developing embedded software.

Model Driven Development and Test Driven Development are two paradigms that are emerging in the world of soft-

ware development. How do they differ from the traditional waterfall development process and other techniques? Do these techniques really assure better quality software and do they speed up the development time? Which one to choose in what case?

During this seminar the experts from industry and the academic area will clarify these questions and they will share their experiences and best practices. The seminar is meant for embedded software engineers, system engineers and project managers who are interested in new techniques for developing sound and robust software systems.

In parallel to the presentations a mini-

exhibition will show products and demos. We will provide time and opportunity to network with the different participants and presenters to allow discussions on details.

The complete program details are available on our website:
<http://www.dspvalley.com>

All the presentations will be given in English.

For more information please contact Filip Vincent (filip.vincent@dspvalley.com or +32 16 24 14 43)

Camera Based Fall Detection Symposium

<http://www.fallcam.be>

**KHK, Geel, Belgium
October 30, 2009**

As a part of their IWT-funded research project on vision systems for the detection of fall incidents of elderly, the project team would like to invite you to attend a half-day symposium on this research topic. The symposium will take place in Geel (Belgium) at the campus of the Katholieke Hogeschool Kempen.

Registration for this event is mandatory and can be done on: <http://www.mobilab-khk.be/fallcam>. For more information about this symposium or the research project, please contact Mr. Glen Debard (glen.debard@khk.be) or visit <http://www.fallcam.be>.



The schedule:

- 09:30 Registration
- 10:00 Welcome by dr. ir. Bart Vanrumste (Mobilab,KHK)
- 10:10 Introduction to falls of elderly people - Prof. dr. Koen Milisen (K.U.Leuven)
- 10:30 Computer Vision Techniques for Dangerous Situation Detection in Domotics Applications – dr. ing. Roberto Vezzani (University of Modena and Regio Emilia, Italy)
- 11:00 FallCam: Camera System for Elderly Fall Detection – ing. Glen Debard (Mobilab, KHK)
- 11:30 Appearance-based action recognition in movies – Prof.dr.ir. Tinne Tuytelaars (VISICS-PSI, K.U.Leuven)
- 12:00 Conclusion by dr. ir. Bart Vanrumste (Mobilab,KHK)
- 12:15 Lunch with networking

Seminar: Embedded Electronics in Precision Agriculture

<http://www.dspvalley.com>

**ILVO, Ghent, Belgium
November 17, 2009**



On November 17th, 2009, you are cordially invited to attend a technology seminar on the usage of modern electronics in the field of precision agriculture. DSP Valley, Boerenbond and ILVO (Institute for Agricultural and Fisheries Research) are pleased to welcome you in Merelbeke (Ghent, Belgium) on the premises of ILVO for this inter sectoral seminar.

Applications like robotic aids for the harvesting of fruits and vegetables, automatic monitoring systems for temperature and humidity in greenhouses and RFID tags for livestock are becoming wide spread in the sector, but what can technology do more for the modern farmer? What are the needs of today's agricultural sector and how can they be fulfilled by using electronics?

The goal of this event is to bring the

two worlds of electronics and agriculture closer together, to create a fertile soil in which new applications and interesting cooperation possibilities can take root. Practical information such as a detailed program will soon appear on the website of DSP Valley (<http://www.dspvalley.com>).

For more information, please contact Bjorn Van de Vondel (bjorn.vandevondel@dspvalley.com).



Contact Information

/k/ Embedded Java Solutions in set-top box project for elderly • p.1

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Personalized Citytrip Planner for the Flemish Art Cities is unique in the World • p.3

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NXP Leuven deploys the first practical field test of road user charging in The Netherlands • p.4

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Jos Corstjens of tbp electronics wins the European Quality Leader Award 2009 • p.4

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IMEC demonstrates first spectrum sensing capabilities for cognitive radios • p.5

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NXP Semiconductors Adopts Target's IP Programmer Tool-Suite for Next-Generation Automotive RISC Processor • p.6

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DSP Valley Meets Electronics-KTN • p.7

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