

Bull Direct

Bull's monthly newsletter

Open Source is an assurance of innovation and sovereignty



By way of introduction, I'd like to recap some facts and figures, just as I did during the World e-Gov forum mid October. In the first place, it seems to me absolutely essential to remind ourselves of the astounding speed at which people are

adopting technology on a personal level. While a hundred years had to elapse between the invention of the fixed telephone line and its becoming a common household commodity, it only took a fifth of that time for personal computers to become an essential item, and only a tenth for the mobile phone. In the same way, 700 million people in the world – that's 14% of the world population – now use the Internet, and the proportion represented by American "Net surfers" has fallen from two thirds of the total to just a quarter in less than ten years: a figure that underlines the explosion of this mode of communication worldwide.

PUTTING ENOUGH VALUE ON COMPUTER POWER

Against this backdrop, three fundamental trends are clearly emerging. First, we are witnessing exponential development in communications networks of all kinds, both fixed and wireless. Secondly, access points are becoming standardized with a proliferation of "active" objects being used on these networks. Geo-location, intelligent objects, the second generation Web, are among the many new applications that will contribute to the development of this interconnected world. And finally there is the third trend – certainly one that is less visible, but just as fundamental – the explosion in processing power and computer storage that has enabled the information society to develop. In this vein, let's not forget that the company Google is not – as is all too often believed – just a search engine, but first and foremost a gigantic computer processing force, of which the most visible application is currently the search engine. Today, through the Quaero project, Europe is seeking to launch into the domain of search engines. We can only encourage this initiative, but it seems to us that what is currently lacking in this ambitious

(Continued on page 2)

CONTENT

p.6/Hot topics: Bull, CEA, HLR5, Intel and Quadrics announce the creation of the TALOS alliance for the research in Europe.

p.7/Business news: Bull modernizes the Bulgarian Customs IT infrastructure. Social security in France. Hungarian Ministry of Justice. The city of Leidschendam-Voorburg chooses Bull's MidOffice solution. Handicap International deploys Open Source IT solutions in the field.

p.10/Expert voice: Franck Potiez – Bull, geolocation solutions integrator.

p.13/Solutions: Bull announces the launch of NovaForge, an innovative, collaborative software development platform based on Open Source. Bull NovaScale servers: the first to feature quad-core Intel® Xeon® 3200 series processors.

p.14/What's new – p.15/Events

EXECUTIVE OPINION

Jean-Pierre Barb ris, General Manager, Bull Services and Solutions.

"Bull brings a professional approach to the world of Open Source"

What role does Bull intend to play in the area of Open Source software?

Our first priority is to bring a more professional approach to an area

that has experienced rapid developments in information systems, brought about by the individual and largely uncoordinated efforts of... *(Continued on page 3)*

GUEST CONTRIBUTORS

Kim Polese, CEO of SpikeSource.

"Open Source will displace all proprietary software for the non-core elements of many application areas"

A worldwide leader in business ready Open Source software, SpikeSource integrates, manages and distributes Open Source applications through a global network of trusted solution providers. The company certifies complete solutions with an automated test framework that performs over 300,000 daily tests. The SpikeSource portfolio of SpikIgnited solutions includes a comprehensive software update and support service called Spike™Net. On January 30, Bull and SpikeSource formed strategic partnership.

(Continued on page 5)

collaboration is the presence of IT makers, at the top of the list of which should be the company I have the honor of leading. In the same way, it seems to me that the computing dimension of the Quaero project has been underestimated, given the project's wide range of possible applications.

In general, we underestimate on the one hand the importance of processing power in the future development of the society, and on the other, our technological capacity to fulfill its growing needs. When it comes to the first point, in France we have seen first hand the problems experienced in introducing on-line tax returns. These were certainly not due to lack of ability on the part of Internet users, but really to insufficient computer processing resources being made available to enable the system to operate correctly. Since this inauspicious start, the necessary processing power has been implemented, and the on-line tax return system is one of the beacon applications of e-government in this country. But in the meantime, we mustn't forget that not only the requirement for computing capacity, but also the processing and storage needs will be multiplied by 100 over the next ten years!

AFFIRMING OUR AMBITIONS

The second point is the crucial importance of free software and open standards, both when it comes to hardware and research. In the case of the TERA-10 supercomputer we delivered to the CEA, the software that operates includes one million lines of code: 80% of this code originated from Open Source, and this meant we could develop the product in one fifth of the time that would have been required using traditional techniques. In other respects (and this aspect is sometimes ignored) the use of blocks of Open Source code guarantees independence for applications vis-à-vis any supplier: always a more strategic approach. Also, I believe that the deployment of Open Source is a significant factor in accelerating technological developments, as well as being a virtual guarantee of innovation and sovereignty.

To sum up, it seems to me vital that all of our elected leaders become aware that IT is becoming an indispensable component in every household, and a resource for which certain applications will be able to be delivered or managed by local authorities in the same way as water or electricity. Indeed, we have just set up a contractual arrangement of just this kind in the UK. Finally, let's not forget the key role of some applications in generating employment. For example, the on-line auction site eBay has contributed to the creation of an ecosystem of some 750,000 people worldwide who gain a major source of their revenue from transactions on this platform. We are now able to build active and collaborative relationships through the medium of networks. We need structuring policies to support the development of these technologies and put more of an accent on our R&D efforts, which are a long way behind those in Japan or the United States.

Interview made by Cités Numériques.



**Didier Lamouche, Chairman
and Chief Executive Officer**

EXECUTIVE OPINION



What role does Bull intend to play in the area of Open Source software?

Our first priority is to bring a more professional approach to an area that has experienced rapid developments in information systems, brought about by the individual and largely uncoordinated efforts of thousands of diverse interested parties. The main issue here is one of IT system governance.

In real terms, the proliferation of Open Source components represents a formidable resource that most people still know relatively little about, and, because of this, it is a movement that is hard to manage. So every provider knows that while 90% of IT projects include so-called "Open" components, in the majority of cases, the companies leading these projects are completely unaware of their presence.

The reality is that Open Source is both omnipresent and almost invisible. Open Source software has an ever-wider field of applications: one which, far from being relevant only to system components, also concerns the most critical applications. Bull's initiative in this context involves coordinating the efforts of major companies in the industry and working with them to adopt a pragmatic methodology. In actual fact, this strategy involves identifying the advantages each software component offers clearly, while avoiding any dogmatic attitudes, whether "for" or "against" Open Source. It is no better to refuse from the start to use Open Source than it is to try and impose its widespread uptake, and in the process jeopardize the existing achievements. In any case, even the most demanding of users now recognizes Open Source's

"Bull brings a professional approach to the world of Open Source"

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strengths when it comes to robustness or security. It's worth remembering, too, that Bull itself deployed France's most powerful supercomputer for the French Atomic Energy Authority (the CEA) at the start of last year, and that the software that operate it relies on Open Source components to the tune of 80%, as against 15% on proprietary applications and 5% on bespoke software developed by Bull teams.

Over and above these intentions, what concrete solutions is Bull offering to allow businesses to reap maximum advantage from the two worlds?

In essence, Bull has put together a range of services designed to resolve the problems organizations meet when trying to manage Open Source software. The main challenges in this area are well known: they relate to maintenance, and component integration or development timescales, not forgetting the essential condition of interoperability. This range of services, known as Open Energy, responds to four major categories of needs: support, porting, development and integration.

If we take maintenance, our Open Access service gives companies and public sector bodies a single point of contact for all the support and maintenance they need for their software stacks (whether at level 2 or level 3), in the knowledge that this support is available 24/7 in a multi-lingual environment.

The second group of services involves porting to Open Source. Called Open Exchange, this service enables an organization to port its operational applications from existing software stacks to the Open Source software stacks that it has chosen, in a workstation or server environment. In this area, Bull uses migration methodologies, tools and professional infrastructures for databases, messaging systems and infrastructures, for workstation or application server environments.

A third category of services fulfills the needs for development work in an Open Source context. For Bull, this involves offering the use of its network of software development factories to businesses, guaranteeing comprehensive expertise in technologies such as JAVA, J2EE and PHP. In parallel, we have developed a collaborative and secure infrastructure, NovaForge™, based on distributed development methodologies, designed and used by our own R&D teams. NovaForge™ is a true "industrial" software factory, and is a key element within our drive to improve development productivity.

Finally, the Open Enterprise service guarantees integration of Open Source components within the information system. In particular, it ensures cost and quality control for these components in the framework of co-operative work projects, portals, exchange systems, Enterprise Application Integration (EAI) or Enterprise Bus Services (ESB). In addition, Bull development projects such as the JOnAS (Java Open Application Server) application server and the Bonita workflow engine enable business applications to be managed as an integral part of service-oriented architectures (SOAs).

What human and technical resources does Bull have at its disposal to guarantee adequate provision of all these services?

We should be clear from the outset that 40% of services delivered by Bull are Open Source-related, which in itself demonstrates our legitimacy and our standing in this domain. So it follows that Open Source skills are a major feature of all Bull's centers, both in Europe and elsewhere in the world, representing a total of some 4,000 staff.

This vast network is mainly dedicated to Open Source technologies and the various services offered are supported by all our service centers in France (in Bordeaux,

EXECUTIVE OPINION (CONTINUED)

Angers, Paris, Grenoble, and Marseille) and abroad (in Brazil, Poland and China). Bull can similarly mobilize its two specialist R&D centers at Phoenix in the United States, and Grenoble in France.

In terms of support, all these resources effectively enable Bull to provide level 3 and 4 support services, as well as to manage its entire range of expertise.

What will be the next stages of your involvement in Open Source?

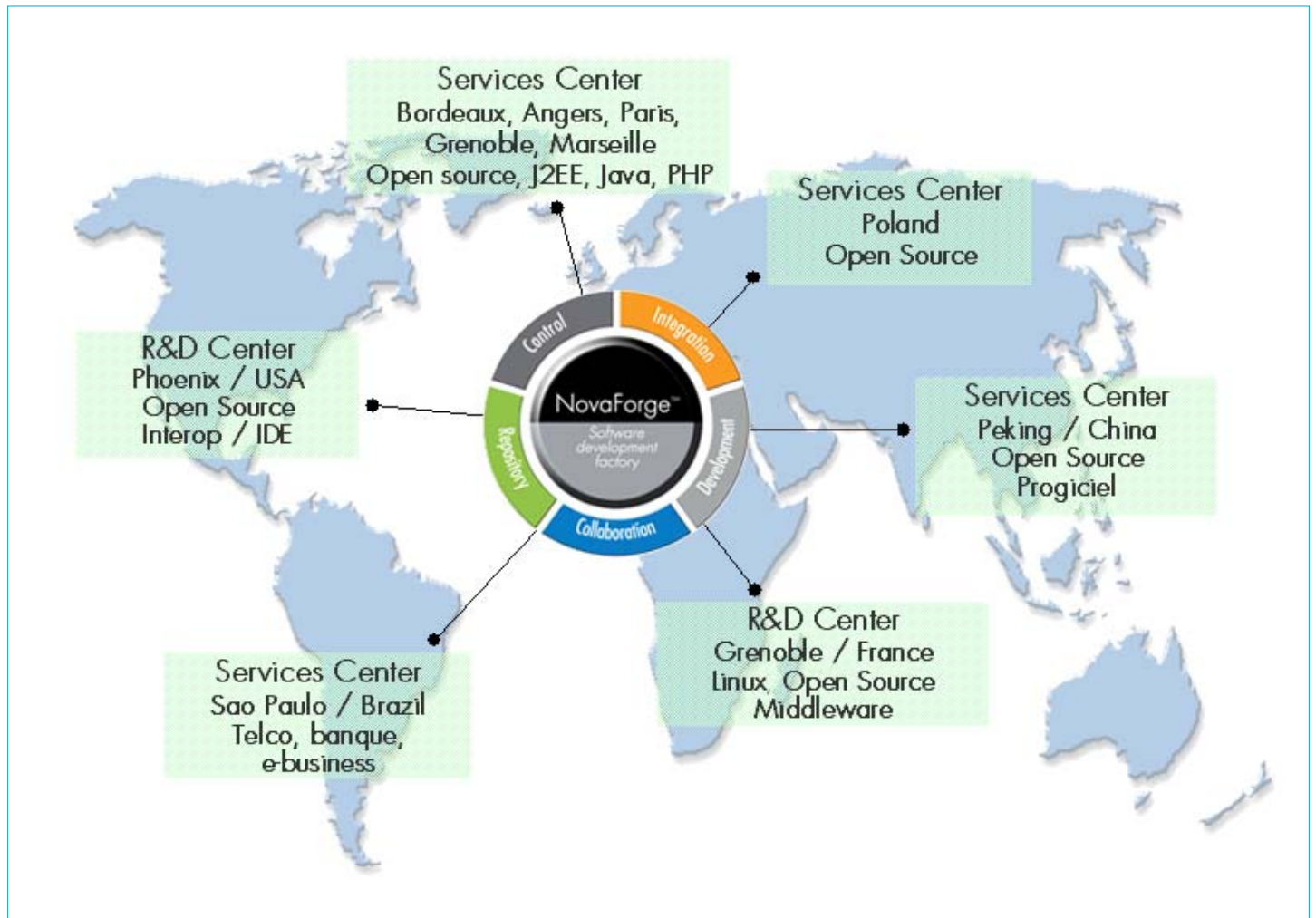
The motto Bull has chosen to describe our

ambitions in this area is to be "Architect of an Open World™". Playing this role, as a systems architect, led us to launch the NovaScale program in 1998, and to found the ObjectWeb consortium in 2002, in partnership with INRIA and France Telecom. The year 2007 will undoubtedly be marked by a speeding up of the process of forming major industrial groups around Open Source. It is in this context that the ObjectWeb consortium decided to add a new dimension in its merger with the Chinese consortium OrientWare, and to formalize a strategic

agreement with RedHat. These initiatives form part of the strategic continuity initiated by Bull to increasingly professionalize and automate the Open Source universe, and to continue to guarantee increased interoperability between components, better quality and more effective governance for corporate information system.

Interview made by CIO, January 2007.

Bull has established a widespread network of development and R&D centers dedicated to Open Source technologies



GUEST CONTRIBUTORS



“Open Source will displace all proprietary software for the non-core elements of many application areas”

Kim Polese, CEO of SpikeSource.

A worldwide leader in business ready Open Source software, SpikeSource integrates, manages and distributes Open Source applications through a global network of trusted solution providers. The company certifies complete solutions with an automated test framework that performs over 300,000 daily tests. The SpikeSource portfolio of SpikeIgnited solutions includes a comprehensive software update and support service called Spike™Net. On January 30, Bull and SpikeSource formed strategic partnership.

The use of Open Source is growing very rapidly worldwide. According to you, what are the key reasons for this success?

Kim Polese: Open Source software is successful for a variety of reasons. At the core are cost, flexibility and functionality.

- **cost:** OSS lowers overall cost to acquire, deploy and manage software
- **flexibility:** OSS eliminates vendor lock-in and opens the door to low cost commodity hardware as well as software
- **functionality:** developers creating OSS are able to leverage mass collaboration and harness the collective intelligence of the global developer community to bring about innovation and new functionality.

Why was SpikeSource founded? What value do you bring to enterprises and to the Open Source ecosystem?

SpikeSource was founded to accelerate the adoption of Open Source software. The co-founders, Ray Lane and Murugan Pal, set out to tackle one of the core problems of Open Source adoption, that of interoperability of the wide range of components that make up a solution stack. By applying process automation to a complex problem, SpikeSource is able to integrate, test and certify hundreds of components on a nightly basis, ensuring that applications will run reliably. We bring a broad range of business-ready applications to enterprises at lower cost than previously available. We are introducing enterprise-class functionality from innovative and fast-moving Open Source companies and projects.

SpikeSource works with many companies and projects in OSS to ensure that

delivered solutions are supported. This is called a “federated” support model and is something that allows SpikeSource to contribute to the Open Source community by managing bugs and patches for Open Source infrastructure and application software.

What is your partnership strategy? Why did you choose Bull as a partner?

SpikeSource has no direct sales organization; all of our sales are delivered through channels. We look for channel partners globally which can work with us to accelerate the adoption of OSS. Bull is a logical partner because of their focus on Open Source, their reach throughout Europe, and their credibility and experience as a systems integrator for some of the largest enterprise companies in the world.

With many strategic announcements last year (Red Hat, JBoss, Oracle, Microsoft-Novell) the Open Source ecosystem evolves rapidly. According to you, what are the key OSS market trends for the future? What is SpikeSource strategy in this context?

Changes in the Open Source market signal the maturing of the Open Source industry and various Open Source business models. We see the strong penetration of Open Source in selected application areas such as software development, web hosting, data centers and embedded systems. We believe that Open Source will displace all proprietary software for the non-core elements of these application areas. However, we see a gap in the adoption of OSS as a packa-

ged business solution. Packaged solutions require that there be a single vendor to support the entire software stack as well as that there be easy installation, update and management. SpikeSource is focused on these aspects of Open Source in order to bring OSS applications to a mass market.

More information about SpikeSource:

<http://www.spikesource.com>.

More information about Bull and SpikeSource strategic partnership:

<http://www.wcm.bull.com/internet/pr/rend.jsp?DocId=208533&lang=fr>



HOT TOPICS

Bull, French Atomic Energy Authority (CEA), German National High Performance Computing Center (HLRS), Intel and Quadrics announce the creation of the TALOS alliance

The five founder members of TALOS (Technologies for Advanced Large scale Open Supercomputing) have given themselves the key mission of accelerating the development in Europe of new-generation High-Performance Computing (HPC) solutions for large-scale computing systems.

Bull, the French Atomic Energy Authority (CEA), German national HPC center HLRS, Intel and Quadrics today announced the creation of the TALOS alliance, aimed at accelerating the development of high-performance computing solutions in Europe.

The five founding members – all of them major players in HPC technologies and computer simulation, as well as in servers and data processing infrastructures – are aiming to encourage the development of more open and powerful new technologies designed primarily for large-scale computing infrastructures and extensive server networks.

The TALOS alliance lines up with current development efforts in Europe aiming to provide the region with top level HPC technologies, particularly against the backdrop of the Seventh Framework Program (FP7) launched by the European Commission in 2007.

From the start, the TALOS alliance has been designed to be open to welcome new associate members, who will work on European-based research projects alongside the five founding members.

The principle objectives of the alliance are to:

- Meet the technological challenges arising from large-scale computing systems and management of very high volumes of structured data
- Provide European researchers and industry with world-class tools and expertise.

For more information, please contact TALOS at:

contact@talos.org

BUSINESS NEWS

Bull modernizes the Bulgarian Customs IT infrastructure with its 130 open servers

Bulgaria has faced a demanding set of challenges in becoming part of the European Union (EU). One of the major projects to be undertaken as a priority was to adapt Bulgarian customs to EU standards.

After Bull's success in 2005 in being selected as the developer and integrator of Bulgaria's main customs tariff management system application – ITMS (Integrated Tariff Management System), which was successfully delivered at the end of 2006 – Bull was recently also chosen to supply the IT infrastructure for this key business application.

The Customs Agency's existing environment was based on IBM AIX® servers. Bull used its expertise to propose a solution to the customer based on NovaScale Intensive and Universal servers and highly available large-scale Escala servers configured with the ARF (Application Roll-over Facility) solution and StoreWay FDA disk storage for the central site.

Another key element of the challenge faced by the customer was the geographic spread of its 96 customs offices, leading to a high administrative burden and cost of ownership, as well as heterogeneous IT equipment that needed to be connected to the central site, which could increase the risk of downtime. Here Bull provided a very powerful and cost effective solution based on NovaScale servers running

RedHat Linux. Each customs office was equipped with a NovaScale Universal server connected to 10 regional sites, where a high-availability solution based on two NovaScale Intensive servers with Bull's ARF and new StoreWay Optima storage are installed. Because Bull was able to provide the Customs Agency with a complete solution including its unique high-availability application ARF, which supports both Linux and AIX, the Group was one step ahead of the completion.

"We have particularly praised Bull's faultless involvement in the ITMS project," said **Georgi Grigorov**, Deputy Director of the Bulgarian Customs Agency. *"We chose Bull again because of its ability to provide a solution based on our existing environ-*

ment, coupled with the flexibility of Linux-based solutions to deliver powerful scalability and performance, installing the high-availability ARF application in both environments to reduce systems administration complexity. This is a unique proposition in the marketplace" he added.

"Taking into account the Customs Agency's key challenge, we have proposed a multi-tier IT infrastructure (local offices, regional sites and central site), with the best value proposition for each level of the infrastructure: openness and scalability together with high availability at the regional and central levels. Major competitors could only provide a portion of the customer requirements; our proposal provides a solution based on open architecture, which gives the Customs Agency a wider choice for the future development of its environment" added **Jimmy Char**, General Manager of Bull in Bulgaria.

Social security: Bull consolidates systems at 123 family allowance offices around eight regional centers

The "Family branch" of the French Social Security system – that pays notably family allowances – forms an overall network constituted by the Caisse nationale des allocations familiales (CNAF), 123 branch offices of the Caisse d'allocations familiales (CAF), along with eight regional IT processing centers (or CERTI). In 2005 alone, France's family allowance payments totaled €62 billion.

To ensure the level of personalized support its 11.5 million beneficiaries expect, the Family Branch has to be able cater for a huge diversity of situations. That is why, in February 2006, the CNAF launched an open tender to consolidate the 300 AIX® servers of its 123 CAF branch offices onto its eight regional centers, five of which are equipped with Bull servers, and three with IBM machines.

The specification called for high-level AIX servers supporting virtualization and micro-partitioning. Two business recovery centers were also required

Bull has won this major consolidation project with a solution consisting of 22 Escala PL6450 P5+ servers running under AIX, distributed across the eight regional production centers and two busi-

ness recovery sites. The maximum contract value is 26 million over four years.

Key success factors for Bull's added-value proposition

"The Family branch, like the other branches of the French Social Security system, have undergone some very profound transformations of their businesses with a view to economizing, becoming more efficient, and seeking to strengthen service delivery. Our aim is to offer personalized services to those entitled to benefits, while working to combat fraud. The infor-

(Continued on page 8)

BUSINESS NEWS (CONTINUED)

ation system is an important driver when it comes to successfully delivering these transformations. This consolidation project has been won by Bull because they offered a particularly powerful solution in terms of service continuity and cost. We also appreciated the technical input from Bull's experts at Echirrolles, notably when it came to virtualization and micro-partitioning," commented

G rard Russeil, Information Systems Director for the CNAF.

"Bull has been operating in the social services market for several years now, both in France and internationally. We have equipped production centers, and contributed to business application modernization projects, as well as installing customization and monitoring tools to help

manage relationships with benefit holders. We are particularly proud of having won this major consolidation project, which has already got off to the best possible start and where the main bulk of the work is due to be completed during 2008, according to the schedule agreed with the CNAF," added Jo l Blanc, Managing Director of the Public Sector and Social Security Division, Bull France.

Hungarian Ministry of Justice and Law Enforcement entrusted Bull with the processing of company accounts via Internet

In Hungary, the Register Service of the Ministry of Justice and Law Enforcement maintains the national companies register and publishes their financial accounts on the Internet every year.

Companies established in Hungary are required to send their financial accounts to the Ministry of Justice and Law Enforcement for publication on the Internet by the end of May. As a result, the paper versions of over 300,000 annual reports are sent to the Ministry each year, with the Ministry then having to computerise the accounts and put them on line.

Last March, the Ministry issued a public invitation to tender, which has been won by Bull Hungary. The contract value is   3.2 millions over a four-year time-frame. Bull won the public purchasing procedure in fierce competition achieving the best result in the evaluation process, which took into consideration the financial and technical aspects of the offers.

The project

As prime contractor and systems integrator, Bull will deliver the images and the extracted data from the financial statements, using Optical Character

Recognition (OCR) technology), which will involve:

- Registering and scanning the financial statements
- Extracting the balance sheet data using OCR technology
- Creating e-documents, which contain the images and the data from each statement, an electronic signature and time stamp
- Delivering the e-documents for publication on the Internet.

The city of Leidschendam-Voorburg in The Netherlands chooses Bull's MidOffice solution

Digitization improves service to citizens and business processes

The city of Leidschendam-Voorburg has decided to implement the MidOffice solution provided by a consortium made up of Bull, Bentley Benelux, Circle Software and Seneca Web Development. The order was awarded after a European tender.

The consortium's solution enables local government to provide services to their citizens through the Internet. This is

achieved by linking front and back-office applications, and integrating them with workflow and document management systems. By the end of 2007, Dutch cities and towns must provide 65% of all their services through the Internet.

Rogier Dijkgraaf, consultant to Leidschendam-Voorburg stated: "As a local authority, we are always trying to

improve our services to our citizens, both in our town hall and electronically. Using ICT solutions to provide more services through the Internet results in better customer service and efficiency. The providers we selected for this MidOffice solution all provide leading-edge solutions, and enable us to use the Internet more widely."

(Continued on page 9)

BUSINESS NEWS (CONTINUED)

The consortium

- **Seneca Web Development** has already implemented the E-counter suite based on Smartsite Content Management Server, an important building block for the city front-office.
- **Bentley** is supplying the components needed to integrate spatial data into the MidOffice solution.
- **Bull** is supplying the message broker utility, using eMAXX Open Source technology.
- **Circle Software** is providing the document and workflow management system, based on the Verseon platform.

An example of e-service

One of the projects being carried out is to set up a "Report on public space", where citizens can report things like loose

paving slabs or broken street lights. Using the Web form developed by Seneca Web Development, citizens can log complaints or problems in their neighborhood, 24/7. All the reports are logged into the Verseon "warehouse" as new cases. Bentley's geographical information system allows citizens to zoom in a digital map on the location where the problem has occurred, for a very detailed report. The case is received by the Bull and eMaxx solution, and transferred to the various applications involved in processing the case. Circle Software's application keeps track of the status of the case and sends signals to any employees who need to act to solve the problem. Citizens can check the status of the case through the Internet application.

Modernizing

The city has set goals to modernize the way it provides information to its citizens. Rogier Dijkgraaf feels it is essential that a local authority has a clear vision for the future. In his view, digital services are not a matter of ICT, but an integral part of a change process. The city not only plans to provide on-line services, but also wants to digitize the entire process behind the services: *"At the moment, on-line services are primarily window dressing, but we feel that digitizing the back-office process will benefit the citizens in the end."*

Handicap International deploys Open Source IT solutions in the field thanks to Bull

The international non-governmental organization (NGO) that aims to help disabled people, Handicap International, is involved in many emergency situations and implements development programs in almost 60 countries worldwide.

To respond to the need for a structured approach to computerizing its missions in the field, beyond the use of isolated laptops, Handicap International wanted to develop an IT solution that would facilitate collaborative working and ensure data security. The main challenges were dealing with hostile environments (in terms of temperature, humidity, etc.), the requirement for an extremely simple system to meet the needs of local teams with

no IT expertise, and need for a very cost-effective solution.

The answer that Bull provided, integrated and continues to support is the "NGO-BOX": a Linux and Open Source-based infrastructure contained in a single, highly robust "black box", including two redundant Linux servers, network-attached storage (NAS), a mail server, print server, file server, LDAP directory, anti-spam and anti-virus measures, and a firewall, amongst other things.

The NGOBOX provides a base-station to which up to 16 user workstations can be connected, and to which additional features can easily be added, such as Voice-

over-IP, Intranet, application servers, a distributed OpenOffice software suite, charging via solar panels, satellite Internet connections, and access to future ERP/CRM applications that Handicap International may introduce (also based on Open Source solutions such as Compiere).

A veritable all-terrain IT "Jeep" for the workgroup in the field, the NGOBOX was successfully tested in Vietnam and Cambodia in June 2006. The solution is currently being rolled out to Handicap International missions in ten countries: China, Laos, Vietnam, Cambodia, the Maldives, the Democratic Republic of the Congo, the Ivory Coast, Burundi, Angola and Colombia.

EXPERT VOICE

Franck Potiez, new technologies Consultant.

Bull, geolocation solutions integrator



Consultant in New Technologies, Franck has headed up the Mobile Enterprise team at Bull's service center in Bordeaux for the past two years. Working with a team of around a hundred engineers, he is responsible for creating mobility solutions for the Group's entire customer base, both in France and internationally.

Technological advances in the mobility sector are opening up new horizons for applications aimed at all kinds of businesses and organizations. GSM, GPRS, Edge, 3G, HSDPA, etc., the state-of-the-art for mobility never ceases to evolve, with generations of mobile communications succeeding one another, networks extending ever further, and mobile terminals offering more and more technical capabilities.

Among these applications, geolocation is bringing some innovative solutions to a multitude of problems:

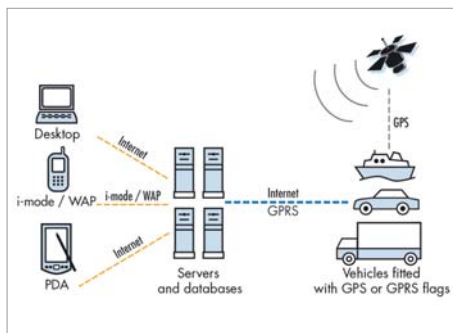
- **In the public transport sector:** improved customer services, provision of dynamic time-tabling, passenger information
- **For local authorities:** co-ordination and computerized tracking of refuse collection, vehicle tracking and management, improved staff working conditions
- **For businesses:** optimized appointment scheduling for maintenance technicians, optimized routing and appointments for sales staff, itinerary calculation
- **For transport and logistics companies:** route optimization, accurate prediction of arrival times for staff and goods
- **In the health sector:** finding closest rescue and emergency vehicle locations for optimized incident response times
- **In banking and high-end industries:** securing and tracking a journey trajectory, defining corridors through heavy traffic.

For businesses as for public services, these new applications can bring considerable benefits, whether for the purpose

of safeguarding goods or people, improving productivity of certain functions, or even setting up new customer loyalty services. Both of these customer groups are therefore taking a closer look at how to implement and gain maximum benefit from geolocation solutions.

How does it work?

Geolocation systems usually depend on GPS (Global Positioning System) solutions. GPS is the most widely used, globally operational, satellite positioning system. The system identifies an object's position on the ground so long as it is equipped with the hardware necessary to the system's operation (sensors, emitters etc...). An alternative European civil system, Galileo, is currently under development.



GPS solutions are combined with mobile telephone technologies (GPRS, Internet), for secure data transmission of co-ordinates, speed, course, etc. to the company's information system, where they can be accessed from workstations or mobile terminals.

The object being geo-located is fitted with a receiver or flag that can receive satellite signals, used to calculate the different localization parameters. Data is then transmitted in GPRS mode to the operator's communication center, before being re-routed into the company's information system. These transmissions can be triggered by particular events (break-in, etc.), initiated on demand or at defined

intervals.

These technologies facilitate the supply of data to back-office fleet management, alarm analysis and response applications. Linked in with mapping tools, they then interface with the customer's information system to consolidate the information gathered.

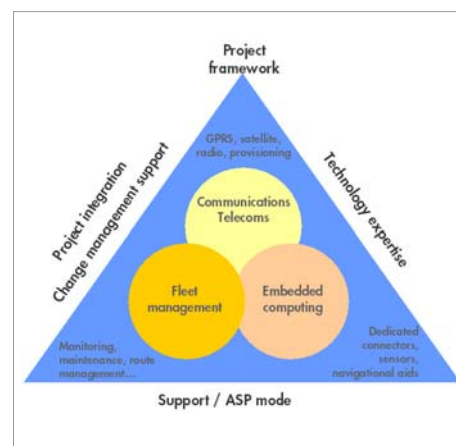
Today, various other technologies are being combined with geolocation applications, and as a result the potential applications for them are rapidly multiplying, as for example in mobile video monitoring or embedded systems.

Bull, geolocation solutions integrator

Implementing a geolocation system is a sizeable project in itself, with a significant technological element (mobility, telecoms, computing...).

Bull – as a professional systems integrator – employs a global approach that includes:

- Definition, installation, and integration of the full technical solution and its component parts
- Interface with information systems
- Support and training services
- Initial consulting and requirements definition
- Change management support
- Overall prime contractorship
- Integration of GPS receivers and dedicated sensors



EXPERT VOICE (CONTINUED)

- Provision of back-office applications
- Specific development work on mobility
- Interface with information systems, and processing embedded data
- Multi-media publishing (passenger information)
- Providing server infrastructure
- On-site implementation and skills transfer
- Hosting or ASP mode
- Maintenance and technical support.

Bordeaux service center

Bull co-ordinates all these skills from its Bordeaux (France) service center, capitalizing on R&D investments made over the past decade in innovative projects for telecoms operators, and enterprise portal and mobility solutions such as geolocation, mobile workforce services and embedded video monitoring systems.

More and more practical applications for geolocation

Bull has designed and created a number of geolocation systems, and contributes to customers' strategies to implement such systems within their organization, from the organizational, technical and software points of view.

These applications include:

Route optimization: working for a cleaner city center.

The transport sector is clearly concerned with route optimization, but so are local authorities, town and city councils. Bull has been chosen by a leading city council to put in place an experimental system for "geolocating" the vehicles in their street cleaning fleet (rubbish collection trucks and road sweeping vehicles). The customer's brief was to optimize the regular routes traveled, fulfilling existing security constraints, but providing elected representatives and citizens with a traceable result of the service provided.

Bull designed a complete geolocation solution including:

- Vehicle position (course, speed, place) information uploading via GPRS, plus data concerning events on the ground (declaration of tags, bulky waste objects, diverse incidents...). Data is entered via an embedded touch-screen console, and then uploaded to the central control unit in real time. Here it will be interpreted and the relevant actions will be triggered. The solution also

enables a vehicle's exact journey to be recorded, so providing a traceable record of the service provided (place, time, nature of the intervention)

- Specialized sensing equipment to monitor the weight of the truck, tachography, the presence of staff members on the step-hangers/running boards, to ensure that employee safety concerns are being met
- Real-time navigation assistance: an essential help when replacement staff are unsure of the established route, or in the event of traffic problems.

Improved service quality at controlled cost for one passenger transport company



Real-time information about whether a bus is due to arrive early or late, or use a different route from usual, is of vital importance to passenger transport companies, and especially so in the event of an incident, as the company can warn other passengers of changes to the schedule and take corrective action. A major urban and inter-urban transport group has entrusted Bull with the job of developing a passenger assistance system that is operationally light, and based on geolocation technology. This solution includes installation of a command and control interface for uploading real-time information about routes, speed and locations, enabling dynamic calculation of early and late arrivals. This system is linked to a passenger information system. The advantage of using geolocation in this case is to be able to take advantage of "light" technologies not requiring embedded systems that are often more costly, and so less accessible to medium-sized local authorities.

For one operator's technical staff, optimization resulted in improvements to their quality of work.

This operator sought to optimize its rou-

ting function for mobile technical staff by gaining access to more operational information, so as to be able to respond better to the needs of business customers or individual clients. For each customer request, the aim was to identify not only the nearest available technician, but also the one best qualified to solve the problem identified.

Bull has designed a wireless console-based geolocation solution, so technicians in their vehicles can interface, via GPS, with the operator's mission management software.

Bull has also integrated within this project an alarm console used to guarantee the security of lone workers, called the PTI (Protection du Travailleur Isolé or lone worker protection system), linked to the vehicle's GPS. In the event of a problem or sudden illness, the technician simply presses the alarm button on the console, the alarm is transmitted via the GPS to the staff member's base location, which in turn identifies where the worker is and takes appropriate action.

An example of freight security and fraud prevention by customs and excise staff, or the way to transport goods from one place to another while guaranteeing the integrity of the load.



The authorities are facing increasing incidence of fraudulent import and freight transit declarations. Bull has designed a satellite geolocation system linked to electronic security systems (RFID-type locks for containers, and optical cables for lorries carrying tarpaulin-covered loads). This type of installation will detect any unauthorized interference with the load and immediately transmit the information via satellite to the customer's information system.

Emergency handling, or managing critical interventions in real time.

The way incidents are managed is of

EXPERT VOICE (CONTINUED)

crucial importance, whether in the health, security or fire and rescue services sectors. Geolocation is a key tool for these services. During forest fire fighting missions, for example, team coordination for the fire and rescue services is vastly improved by having access to accurate data about their positions in relation to the fire. And fighting the fire from above with aircraft is more effective and less wasteful when there is a precise target to aim at. During a fire-fighting operation, the fire services need detailed maps with key points of interest (water source points, fire hydrants, high-risk buildings such as chemical depots, etc). Part of this project is to deploy a system for updating this embedded mapping in the field. Uploading the ground information is best achieved via satellite (Irridium) since the GPRS network is often overloaded in the event of fire. 100% reliable links are

absolutely indispensable in this situation.

Managing a vehicle fleet: geolocation is at the heart of the operation.



- Optimize a group of vehicles
- Inform passengers, users or customers in real time
- Re-route vehicles in the event of an incident, an emergency or a major public event
- Anticipate vehicle maintenance...

For Bull, the real challenge presented by these systems is how the different components can be made to work together, and globally, how they integrate within the information system for optimum exploitation of data.

Finally, the most commonly cited application for geolocation is vehicle fleet management, as it fulfills many of the most vital requirements of transport or car rental companies, and also of regional authorities. Geolocation can be deployed to:



SOLUTIONS

Bull announces the launch of NovaForge, an innovative, collaborative software development platform based on Open Source

As part of its industrial approach to the world of Open Source software, Bull is today launching NovaForge™, a secure, collaborative application development platform.

Reducing the development workload and the associated risks, optimizing timescales, improving the quality of deliverables, ensuring acceptance by the various players involved.

NovaForge is a comprehensive group of innovative services and tools, designed by Bull to help ensure a more professional and structured approach to software development and maintenance projects. The platform is based around Open Source components that are extensively used by Bull's R&D teams in even the largest distributed software development programs, involving participants throughout the world and numerous Open Source development communities and professional contributors.

With NovaForge, Bull is aiming to respond to the complex challenges of developing business applications in an open world: pressure on timescales; the need to distribute developments between the front office, and back-office service centers or R&D facilities; bug-fixing, with the help of several different teams; assigning of experts; third-party maintenance; managing the numerous different parties invol-

ved; version control; alignment with industry standards; and interoperability.

As Jean-Pierre Barbéris, General Manager Bull Services and Solutions stated: *"Bull's aim is to bring a fully industrial approach to this field, where the growth and development of information systems has been speeded up as a result of thousands of individual, uncoordinated initiatives. We have brought together tools from various different Open Source software factories and other sources to create a powerful, rapid and simple toolbox: capitalizing on Bull's R&D expertise and experience, and now available for the first time for anyone developing software code. Bull's own Services Centers and R&D facilities worldwide – with their wealth of expertise, proven tools and methodologies – are already "Powered by NovaForge", as part of a highly industrial, networked approach."*

NovaForge is also available for use by customers.

NovaForge can be used for application development or renovation projects in J2EE, PHP and .net environments, applica-

tion maintenance on already-developed software components, and professional application testing. Having been used by Bull at its own large-scale computing centers since 2005, NovaForge is now being made available to customers who wish to use it in their own organizations, whether on-site or under ASP arrangements.

The platform is structured around five key areas:

- **THE DATABASE:** acts as a repository for best practice, as well as tried-and-tested and reusable tools and procedures.
 - **THE COLLABORATIVE SPACE:** a portal that enables information to be shared in a structured way, holds all the project data and documentation, and enables documents and technical prerequisites to be published dynamically.
 - **THE DEVELOPMENT SPACE:** based around the NovaStudio™ development workstation, which uses the Eclipse component and other standard methodologies and tools, NovaForge provides real drivers to simplify and standardize the development process.
 - **PROJECT MANAGEMENT:** NovaForge offers both a shared view of project status, and the collation of performance indicators.
- NovaForge is part of the Open Energy family of Open Source services from Bull.

Bull NovaScale servers: the first to feature quad-core Intel® Xeon® 3200 series processors

Increased performance/watt, energy efficiency, scalability and reliability for the new entry-level servers from the NovaScale Universal range

Bull has announced the single-socket quad-core T810 and T820 servers featuring the new Intel® Xeon® 3200 series processors, codenamed Kentsfield. Available in tower format, these entry-level servers used as file or print servers per-

fectly meet workgroup requirements. As with all NovaScale servers, the T810 and T820 servers are administered using NovaScale Master, the software suite developed by Bull to ensure ease of operation and reduce the management costs



of IT infrastructures. Available now, the key advantages of NovaScale Universal T810 and T820 are:

- Performance/watt
- Reliability
- Simplified installation and administration.

WHAT'S NEW

Bull and SpikeSource form strategic partnership

Companies aim at dramatically accelerating adoption of Open Source applications in the European enterprise market

Bull, Architect of an open world™, and SpikeSource, a leading provider of business-ready Open Source solutions, have announced a worldwide technology and business partnership to dramatically accelerate adoption of Open Source applications in the enterprise market.

The agreement, which is SpikeSource's first strategic pan-European partnership, demonstrates both companies' leadership and commitment to Open Source services and support.

The partnership combines the strengths and strategies of both companies to help organizations easily leverage Open Source to innovate and reduce costs; by benefiting from business-ready, fully industrialized Open Source applications and services. It will notably combine Bull's platforms and services capabilities, with SpikeSource pre-integrated stacks and applications, which reduce the costs and deployment challenges associated with Open Source middleware and application integration.

Bull and SpikeSource will work together in three areas:

1/ Open Source platform readiness: Bull will integrate current and future SpikeSource Open Source software (OSS) applications - such as enterprise content management, email, CRM and Web 2.0 suite - with its NovaScale servers, therefore exten-

ding the range of the ready-to-deploy OSS infrastructures it provides to its customers. As part of this initiative, Bull and SpikeSource will collaborate on optimizing SpikeSource solutions on NovaScale servers.

2/ Open Source integration services:

Bull will integrate SpikeSource solutions as a component of its Open Energy offering. Open Energy is a comprehensive set of services aimed at helping enterprise and government IT organizations maximize the benefit of OSS in their IT projects. Open Energy is constituted of 4 main strands: Open Access (providing support of OSS applications and components), Open Exchange (providing capability to migrate from legacy software infrastructures to OSS-based infrastructures), Open Service (providing skills and competence to undertake projects and providing turnkey project delivery for OSS-based business solutions) and Open Enterprise (providing consulting and integration services).



3/ Open Source support. Within Bull's Open Access offer, Bull customers may access Bull Support Centers to receive global support for all SpikeSource software solutions, as well as to subscribe to the Spike™Net service developed by SpikeSource. Bull will provide first and second level support capability, backed up by SpikeSource for third-level engineering support, and will provide a single point of contact to customers for both software delivery and support.

As part of the agreement, Bull and SpikeSource will collaborate and exchange information for the development of future, new OSS-based solutions, by sharing roadmaps and market feedback.

EVENTS

Luynes, February 7-8

CUBE: GCOS 7 days

This year, the CUBE GCOS 7 days will take place on February 7-8 at Luynes, near Tours. This yearly GCOS 7 rendez-vous will be completed by a session dedicated to NovaScale servers and solutions. It allows GCOS 7 French customers to find out about the latest advances in the GCOS 7 server family, which includes the new Bull NovaScale 7000

servers. The "Tour" features presentations from Bull experts and customer case studies, notably this year Thierry Ehret-Franck, CIO of CG78 (a regional government authority).

There will be a particular focus on bringing people up to date on the cooperation strategy between GCOS 7 mainframes and open architectures, on Bull's

Open Source strategy, as well as on NovaScale partitioning and virtualisation facilities, including Bull's Virtuo backup virtualisation solution for multi OS environments.

For more information on the program, please contact Pierre-André Walker (Bull) 01 30 80 30 62

or CUBE at 01 48 74 94 17.

Barcelona, 12-15 February

3GSM World Congress 2007

3GSM World Congress, the world's premier mobile event, attracted over 50,000 people in 2006, from more than 180 countries. 3GSM World Congress 2007 will bring together leaders and personalities from mobile operators and equipment vendors, as well as players from the Internet and entertainment worlds. It will feature the very latest technology, services and developments, bringing to life the promise of mobile broadband for all and defining the industry's path to continued growth.

The structure of 3GSM World Congress 2007 is being developed to reflect the ongoing changes in the mobile value chain. The program identifies the risks

that will be taken, and highlights the rewards that can be reaped, in bringing these changes to all geographic markets and mobile services.

The conference program will feature five plenary sessions providing an effective platform for the most senior figures from the mobile industry and other industries that are now impacting the mobile world. Two streams look in detail at the strategic and technical drivers and implications of these. Concerning mobile strategy, subjects like convergence, segmentation and partnership, scaling up, emerging markets, new costs and revenue structures will be covered. Presentations on technical aspects will focus on standards,



WiMAX and mobile TV technology. A third stream is dedicated to the emerging force of mobile entertainment. The technology breakout sessions also introduced last year will be enhanced to allow for deeper examination of key technical issues.

Bull's Telecommunication & Medias worldwide division will be present and will take the opportunity of this major event to organize private meetings with its major customers and prospects.

More information: <http://3gsmworldcongress.com/flashintro.asp>

Paris, February 14-16

Alcatel-Lucent Enterprise Forum 2007

The Alcatel-Lucent Enterprise Forum 2007 will take place in Paris from February 14 to 16. With the theme "User-centric and use-focused, the New Business Generation is here to stay!", the three-day forum will feature the most innovative, user-centric and use-focused communications solutions available today. The forum offers over 80 conferences with industry visionaries, expert analysts, partners, customers and Alcatel-Lucent executives.

Philippe Reynier, Bull consultant in storage, will hold a conference on "Multi



sites Information flow management".

Bull, secure infrastructure integrator and service provider, will be presenting different implementations to illustrate multi-site operational continuity solutions. These different examples will highlight:

- The results of experiments undertaken jointly with Alcatel on remote links several hundred kilometers apart

- The different infrastructure options available, and the impact these choices have on disaster recovery plan policies between sites
- The benefits to be gained from choosing outsourcing and operating service solutions.

More information:

<http://forumalcatel-fr.evenium.com>

EVENTS (CONTINUED)

Paris, 15 February

Virtualization seminar

The benefits of virtualization of back-up resources: from concept to implementation.

Back-up and restore processes are becoming increasingly tough and their ever growing complexity makes it hard to implement the required service levels. To overcome the constraints of heterogeneous infrastructures, IT managers have often put in multiple back-up systems, far from the benefits of consolidation and the optimum use of investment. The main advantages of back-up virtualization are to: guarantee access to back-up data, no matter what technologies are involved, even far into the future; simplify back-up operations; reduce costs; and ensure the security of back-ups. Bull, as "Architect of an Open World™" –

along with its partner Quantim – invites you to catch up on the latest virtualization solutions and its own StoreWay Virtuo offering, as well as to share your experiences with its experts, who will be happy to answer your questions.

Timetable

- 9:00 am - Welcome
- 9:15 am - *Back-up virtualization: what are we talking about?*
Pascal Beyls, Consultant, Bull
- 10:00 am - *Bull, a reliable partner*
Daniel Brouillard, Chairman and CEO of Quantim
- 10:15 am - Break
- 10:30 am - *The benefits of a virtualization solution* – **Claude Radix**, Back-up Virtualization Product Manager, Bull

- 11:15 am - *Implementation and ROI case studies*

Philippe Martinet, Bull Outsourcing Services,
Olivier Galland, ANPE.



To register for the event, go to:

<http://www.bull.fr/actu/storeway>

For more information contact:

Mélanie Augé
on +33 (0)1 30 80 34 08

To find out all you need to know about back-up virtualization, click on:

<http://www.bull.fr/actu/storeway>

Brussels, March 15-16

5th European Business Summit

The 5th edition of the European Business Summit, organized on the occasion of 50 years of Europe, will take place on 15 and 16 March 2007 in Brussels.

With the theme "Reform to Perform: Europe is our Business", EBS wants to play an active role in three D's: Dialogue, Dynamism and Delivery. The challenge is to exchange views and to move Europe forward from declarations to Delivery. Delivery on the promised and necessary reforms. Reform to Perform for

a more dynamic European Union. The conference program will welcome key speakers, among with José Manuel Barroso, President of the European Commission, Viviane Reding, Commissioner for Information Society and Media, and Peter Mandelson, EU Trade Commissioner.

First organized in 2000, the European Business Summit is "the" rendez-vous for all those involved in the development of a dynamic, innovative and prosperous European Union. As sponsor, Bull,

Architect of an Open World™, will run a session on Open Source on March 15 from 10 am to 10:45 am. Chaired by Jean-Pierre Barbéris, General Manager of Bull Services and Solutions, the session will focus on innovative solutions that helps grow business, deliver new services and increase flexibility and efficiency.

More information on WCO IT:

<http://www.ebsummit.org>



Hanover, Germany, March 15-21

CeBIT2007

The leading business event for the digital world

Under its banner Architect of an Open World™, Bull will be attending CeBIT 2007 on the stand of its partner Xandros and within the Public Sector area.

On the Xandros stand, (Hall 5, stand L21), Bull will present opencenter@bull,

the integrated Open Source software stack based on Xandros Linux, Scalix Groupware, O3Spaces collaboration suite, and other solutions.

Within the Public Sector Park, (Hall 9, B76, Stand 7), Bull will show solutions dedicated

to local authorities including "Intelligent Video Surveillance" (IVS): computer intelligence at the service of video surveillance camera networks and disaster management.

More information:

www.cebit.com



EVENTS (CONTINUED)

InfoSecurity industry shows

As each year, Bull will be present at a number of InfoSecurity trade-shows to promote the software solutions of its Evidian subsidiary. This year, demonstrations will focus on Enterprise Single Sign-on (SSO) and Data privacy domains.

Our experts will welcome you at:

- **InfoSecurity Italia**, Milan, February 6-8, Evidian stand: F22.
- **InfoSecurity Europe**, London, April 24-26, Evidian stand: G206.

- **InfoSecurity Belgium**, Brussels, March 21-22, Evidian stand: E062.



Veracruz, Mexico, 25 to 27 April 2007

2007 WCO IT Conference & Exhibition: The World in Transition

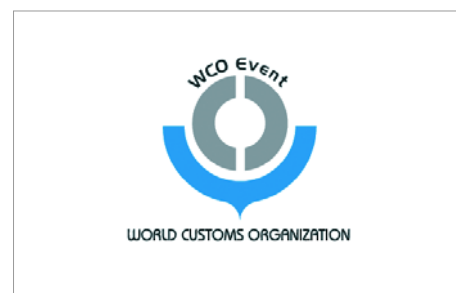
The WCO IT conference and exhibition organized by the WCO* (World Customs Organization which involves 169 Member Governments) will take place in Veracruz/Mexico from April 25 to 27.

According to Michel Danet, Secretary General of the WCO: "The World in Transition" is a particularly significant theme as modern Customs must embrace the integrated supply chain perspective and manage the transition from the castle watch to the modern global environment with increasing volumes of trade and unprecedented calls for safe, secure, efficient and well-managed borders. In this respect, no doubt that IT plays a pivotal role in this new Customs environment which emphasizes the importance of security while promoting the facilitated movement of goods across the globe.

Bull is sponsor again of the 2007 WCO IT Conference and Exhibition. The event will be a new opportunity to exhibit on our booth (#1 & 2) our e-biscus® open and flexible software solution suite for

Customs, which facilitates the legal commerce through fraud detection, fast clearance and efficient enforcement. Our experts would be delighted to welcome you during the company breakout session on April 26 from 3:30pm to 4pm in room A (plenary session).

Bull has gained worldwide recognition in the public sector for its expertise, in particular in aligning Customs systems to new international demands. For several years now, Bull has been involved in developing customs solutions in several European countries during their preparation for EU accession, supporting the implementation of EU requirements. These countries include Bulgaria, Cyprus, the Czech Republic, Hungary, Lithuania, Malta, Poland, Romania; Ireland and Morocco have also selected Bull's Customs solutions to modernize their system.



More information:

<http://events.wcoomd.org/aboutconferenceit2007.htm>

* Established in 1952 as the Customs Co-operation Council, the WCO is an independent intergovernmental body whose mission is to enhance the effectiveness and efficiency of Customs administrations. With 169 Member Governments, it is the only intergovernmental worldwide organization competent in Customs matters.

Phoenix, Arizona 1-4 May

Summit 2007

In today's global, competitive world, Information Technology should be a driving force for enabling change, fostering agility, and improving an enterprise's competitiveness. But conventional information systems can't always keep up with these new demands. Organizations must look to flexible, robust information infrastructures to address the challenges they face in today's fast changing environment.

At Bull's annual customer conference, Summit 2007, attendees will hear from IT industry experts, customers, partners, and Bull senior management on a

wide range of subjects that will help IT executives better understand how to address changing demands. Summit is scheduled for May 1-4, 2007 in Phoenix Arizona.

(Continued on page 18)

EVENTS (CONTINUED)

Agenda Highlights

- Gartner Group presentation on best practices in IT and what to know when making strategic investments.
- A presentation by Bull's senior executive on the company's strategies and some of the new markets that Bull has targeted for future growth opportunities. Real-world case studies by U.S. and International customers who will share their experiences on how new technology solutions have performed against their expectations.

- A look at why Intel's Itanium® 2 systems are providing mainframe-class reliability for more than 70% of the Fortune Global 100 enterprises... and many Bull customers around the world.
- Other presentations will look at the evolution of major trends such as Open Source Software, Service-Oriented Architecture, Microsoft Interoperability, Virtualization and Partitioning, server trends such as Multi-Core and RAS, and Security.
- Over 30 presentations packed with

ideas and recommendations on how IT can improve the efficiency of your enterprise.

Pointe Hilton at Tapatio Cliffs Resort

Summit 2007 attendees will stay at the Pointe Hilton at Tapatio Cliffs Resort, one of Phoenix's premier conference facilities.

Registration:

Register for Summit 2007 before March 23, 2007 and qualify for a Special Discounted Registration Rate. **Please visit our web site for details and to register at:** <http://www.bull.us/summit/index.html>

Biarritz, 7-8 June

CUBE (Bull European User Group)

The 23rd Annual General Meeting (AGM) of the Bull European User Group will be held at the Palace Hotel in the French south seaside town of Biarritz, from 7th to 8th June 2007. The theme of the meeting is: *"Open Source software and mobility"*.

The meeting will be chaired by **Germain Zimmerlé**, Chairman of CUBE, and will also be attended by Didier Lamouche, Chairman and CEO of Bull. Key IT decision-makers will share their points of view on the subject and their experiences. There will also be many opportunities for

exchanges between user group members and Bull senior executives on the challenges involved in the accelerated development of information systems today.



Dresden, in Germany, June 26-29

ISC (International Supercomputing Conference)

The largest supercomputing event in Europe – will once again be held from June 26-29 at the Dresden International Congress Centre in Germany.

Prof. Dr. Hans Meuer, General Chairman of ISC'07 and TOP500 initiator, has again put together an impressive program with the theme *"The social significance or usefulness of supercomputing"*.

The program for the 22nd ISC event includes a three-day conference, alongside an exhibition of HPC solutions. Among the 2007 technological highlights are: High-Performance Networking, operating systems and algorithms for petaflop-scale sys-

tems, as well as industry solutions such as computational fluid dynamics. Two new tracks are in the process to being put together: an "Automotive Afternoon" dedicated to HPC for Automotive Engineering, and a "Scientific Day" that will focus on many aspects of the larger HPC solutions such as: advances in the implementation of large-scale applications (capability computing), computing and data integration in medicine and biology, etc. The eagerly-awaited TOP500 list will also be announced.

Bull will be present and will showcase its latest NovaScale servers and HPC solutions. The Group will take the opportunity

of this international HPC conference to make some announcements.

More information on ISC'07:

<http://www.isc07.org> www.isc07.org

