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**Truffle 100**

**« Towards a European Software Strategy »**

*Check Against Delivery  
Seul le texte prononcé fait foi  
Es gilt das gesprochene Wort*

Truffle 100: The ranking of the top 100 European Software leaders,

**Brussels, 19 November 2007**

Ladies and Gentlemen,

It is a pleasure to be here again at this Truffle event. I would like to thank the organisers, Syntec and Truffle Ventures, and Mr Roques in particular, for inviting me to join you today. This is only the second Truffle event – but they are already proving themselves to be important.

### **Why software is important**

I am here to talk about a European Strategy for Software. Why? Because software is important.

Software in the EU is a 76 billion euro market in its own right. That is already 11% of total ICT spend but when software services are added in this rises to 216 billion euro i.e. nearly one third of the European ICT market.

In addition, software is the fastest growing ICT segment, up 6.5% compared to 2.9% growth in the sector as a whole. Software is predicted to continue to grow at 7% for the years to come. But this is only part of the story.

The main significance of software is that it is everywhere. Today everything depends on software: all the internet and telecommunications services; all machines from giant power stations, through advanced jet planes down to the simplest coffee percolator, all run on software. A new mobile telephone will typically contain more than a million lines of software code. About 20% of the value of a new car is attributable to its software content, making it more fuel efficient, safer and easier to drive. The service sectors: banking, retailing, logistics all rely on software.

What does this mean? Firstly, it means that the ability to produce software is a strategic economic capability. Without the ability to produce software Europe will not be able to function let alone compete in the global market place.

Secondly, it means we are totally dependent on software in our business and private lives. Software systems must be reliable - available 24 hours a day every day of the year - they must be safe and secure. And this is a real challenge because software systems are becoming ever more complex and widely distributed in open networks.

As the on-line service economy develops patterns of competition and business are changing. The software industry is therefore also restructuring. On-line software (or software as a service) is replacing traditional packaged software. As this trend takes off, companies that depend on licence revenue may find their business models under threat.

This is in fact a tremendous opportunity for Europe and the European software industry. First of all we have our own home base of demand to build upon, the EU is a big consumer of software: 35% of the global software market. Second, Europe has high levels of the basic raw material needed for software production: talent. This is indeed an opportunity for all European Member States most importantly for those that are money poor but talent rich. Third, although Europe has not managed to situate itself as the global leader in packaged software, Europe is not weak in software. Our capacities as producers of embedded software put Europe in a leadership position worldwide. The world's biggest software companies in the world are European firms such as Siemens, Philips and Nokia.

I believe that these are the necessary preconditions for the European software industry to ride the rising wave of on-line software. But, the essential point is that this shift to on-line software will change the way the software business is done. It will place a new emphasis on open and interoperable systems that can be upgraded and joined together in networks with other systems. And, although there will always be a role for proprietary systems, I believe that the on-line world will see a shift towards open standards and indeed open source software in order to respond to this new paradigm.

This brings me to the fourth reason why European software is well placed to gain from the on-line services revolution: not only are key developments of

open source, such as Linux, of European origin, fully 70 % of open source developers worldwide are Europeans!

These advantages are ones that give Europe its window of opportunity to develop a leadership position in software. But this window is small and it will soon be closed if we don't act. I can illustrate this already. Even if 70% of open source developers are European, 90% of the economic benefits are being won by US companies.

My view is: If we have the brains, we should also get the gains!

That is why we need a European Strategy for Software and we need it now.

We are taking some steps in this direction. We have two industry-led European initiatives that are spurring the shift towards firstly on-line software services (in the form of the NESSI technology platform) and the secondly Artemis (the Joint technology Initiative that will be approved before the end of this year). We also need to create greater legal certainty in software markets, to create an open development market in Europe and to build up Europe's software talent.

### **NESSI**

NESSI, the Software and Services technology platform, shows how leading European companies can join forces to provide a common vision for the next generation of service-based software.

The strategic research agenda for Software and Services in Europe established by NESSI was fed into the priorities of the first call of the 7<sup>th</sup> Framework programme for Information Technologies. And, following independent evaluation, €42 million of EU funding will flow into 5 strategic research projects necessary to implement an open platform to develop efficient services and facilitate their wide adoption. Let me give a concrete project example, the **NEXOF project** will provide European Industry with

efficient services and software infrastructures to improve flexibility, interoperability and quality.

But NESSI is not just about allocating research money. NESSI is also acting as an open forum to promote standardisation, safety and liability issues, IPR, all of which are critical success factors for Europe software strategy.

## **ARTEMIS**

ARTEMIS also started as a technology platform, but here developments have gone a stage further to the proposal for a full European public-private partnership. The ARTEMIS Joint Technology Initiative, that I am confident will be approved this December and launched next year, aims to allow the EU to consolidate its world leadership in embedded computing.

Embedded systems constitute the software that runs all the machines produced in the world today. These (often invisible) embedded systems are easy to ignore, because they run and run without giving problems, without needing to be rebooted, and without crashing. But we should not ignore them because this is an area of real European software strength. And European industrial strongholds such as automotive, consumer electronics, medical systems, and energy control increasingly depend on embedded systems.

So far embedded systems have tended to be built on a customised basis product-by-product, sector-by-sector. The challenge, as more and more devices gain intelligence and get connected to the internet, is to have more common approaches to design and to test of embedded systems in order to reduce development costs and time to market, while maintaining reliability.

This new industry-led *Joint Technology Initiative* (JTI) will pool Community, Member State and industry resources towards common research goals. The process will introduce a streamlined one-stage evaluation procedure that will allow Europe to move ahead together at an unprecedented scale. The Commission has earmarked 420m € for Artemis in FP7. With an expected leverage of 6€ of public and private research investment for every 1€ of

Community funds, this means between 2 and 3 billion € funding into ARTEMIS over its lifetime.

### **Framework conditions of a European Software Strategy**

ARTEMIS and NESSI will provide research funding that has both critical mass and that is prioritised around strategic priorities. But this by itself will not be enough unless we also get the right framework conditions for on-line software services.

For that we need: legal certainty for both users and producers of software; more openness and transparency towards a single market for European software; and a leap forward in the scale of training and retraining of software engineers.

#### Software product liability

Let me take an example of the need for legal certainty: software product liability. As software is becoming more and more pervasive we come to depend on it to an ever greater extent. As a Society we entrust more and more to software. This brings great opportunities for industry, but also underlines the need for high quality, dependable software.

Many consumers and business remain worried and confused about the licence agreements that they have to sign-up to when they use software. It is true that the industry has achieved spectacular growth and increases in performance. But the World's increasing dependence on software means that we have to have a drive towards both technical and legal maturity in this industry.

On the technical side the rising complexity and connectivity of software means that we have to find more robust and scaleable means of testing software. This will in part be tackled under ARTEMIS and NESSI.

On the legal side, I have been calling for some time for the industry to put its house in order as regards its approaches to software reliability, security and the transparency of licensing. I am therefore very pleased to welcome the recent creation of **SAFECode association** led by Microsoft, Symantec and SAP, for consolidating best practices for creating better and more secure software. I will look at these developments with interest to see if they deliver real progress and if they will form the basis for an open alliance towards more reliable software. I hope to see results because I would much prefer to see an industry led solution rather than regulations being imposed on this dynamic and strongly growing sector.

I also call on the industry to look again at its licensing practices. I do not have to tell you that many users of software products are not happy with the transparency of the licences that they have to agree to today. This is an area that calls for serious self-regulatory efforts to produce models of licences that are open, transparent and fair.

Remember – software is an important and maturing industry. And with maturity comes responsibility.

### **Interoperability and open standards**

As we move towards an economy – indeed a society – based on web-services, software becomes the enabling technology. Under these circumstances, having systems that are based on open interfaces that are interoperable and upgradeable becomes a necessity not an option.

As you know interoperability has been one of the watchwords of Commission policy in this area for some time (i-2010 initiative). But what does this in practice mean? In an economic era driven by innovation and global competition, a multiplicity of suppliers will compete to address large markets, sometimes with incompatible technologies. This is normal, but we have to avoid, whether as consumers, enterprises or public authorities being locked into incompatible and obsolescent technologies. Such an approach would be

entirely in contradiction to the networked economy and to the new paradigm of service based software.

That is why I have been interested to note that leading European industrial players are shifting towards the use not only of open standards but also open source as a basis for mission critical systems. I am not saying that this is a one-size fits all approach that everyone should follow. But, in constructing a European software strategy we need to reconcile a strong competition between hardware and network solutions through open software services. This however requires that market players are prepared to make available standardised interfaces between different technologies. I call on industry to move more forcefully in that direction.

### **Skills, skills, skills**

Finally, I do not have to tell you that we need a whole new approach to generating the talent we need to deliver a European Software Strategy. This is not just a question of resources, but of attitude. We need a much greater respect from the industry for its existing talent base. This is the industry that has one of the highest wastage rates of existing qualified personnel - the working life expectancy of computer engineers is the shortest of any engineering discipline and at the same time one of the greatest problems of skill supply: often staggering from glut to shortage.

I cannot help but feel that there is a lack of foresight in the sector in terms of investing in the skills needed for each coming generation of technology. While it is easier to poach talent from other software players, it's a zero sum game for the industry as a whole. So I put a challenge on the table. As we move to the service-based software we are going to see a quantum leap in the demand for software capable workers. Part of the coming skills crunch will be met by tools and automation, for instance many of benefits of ARTEMIS will come from estimated gains of €15bn per year in reduced system design and development costs by 2015; this is the equivalent of 55 thousand software engineers. But I look to industry to put out a clear, responsible agenda for meeting its future skill needs.

## **Conclusion**

You can see I take software seriously. It has in its hands the future competitiveness of all European industry and the quality of life of Europeans. I am looking for industry to take the lead. We have the talent. We have positions of strength. We have a window of opportunity. Let us not waste them. European has to get strategic about software and we should do it now.

Thank you for your attention.