Abbreviations

ASP Application Service Provider
COTS Commercial, off-the-shelf
CPU Central Processing Unit
EDA Electronic Design Automation
ISV Independent Software Vendor
HaaS Hardware as a service
HPC High Performance Computing
ICT Information and Communication Technologies
IT Information Technologies
LAN Local Area Network
LSP License Service Provider
Q Question
SaaS Software as a service
SmartLM Grid-friendly software licensing for location independent application execution
SOA Service Oriented Architecture
WAN Wide Area Network
WP Work package
1. Executive Summary

In the context of current IT trends, the inadequacy of the existing licensing mechanisms have become evident especially in their geographical restrictions and pricing models. Current licensing mechanisms are not just difficult to adapt to new trends but, in fact, are hindering the wider adoption of these technologies. Software licensing has been identified as a particular concern for users as for the potential benefits of Grid-like technologies (Grids, virtualization, multi-core, clouds, etc.).

The software industry employs the ‘right to use’ model that ensures that the ownership and control of software usage remains in hands of the vendors. This right to use is granted through a license agreement. This license agreement, with the help of a license enforcement mechanism, should ensure the protection of intellectual property and result in license compliance by tracking and managing the licenses in use.

With respect to these licenses, what users want is to control their expenses and have flexibility, while vendors do not vote for a reduction in revenue. The achievement of a consensus, a win-win situation between software vendors and users is the main requirement for a change. For now, users either pay up or find a workaround.

The main players of the software licensing playground are the Independent Software Vendors (ISVs) who own the software and provide licenses for its use, the End Users who use the software in their local or external environments, and the Application Service Providers (ASPs) who provide access to an application over a network. Depending on the relations between these players, we have identified four main licensing scenarios that exist currently. The ASPs are not always part of the licensing scenarios. Nevertheless, they can often offer a good cost-to-performance ratio for on-demand hardware resources for End Users and bring additional business to ISVs.

When it comes to license compliance, there is insecurity at user organizations regarding what a license audit might uncover. For the moment, the most widely used license enforcement product is Acesso Software’s FLEXlm (from version 10.0 it is called FLEXnet) and Platform Computing has recently come up with its Licensing Scheduler, that is a complementary product to FLEXlm, enhancing its functionalities. The future SmartLM product comes to the picture here, offering enhanced capabilities and functionalities that would supersede or add value to current solutions.

From a technical point of view most applications are licensed by client-server license technology or hardware dongles. In addition, other used models are the node-locked licenses that are ‘per named node’ license models and score-based licenses where the different functionalities of the software have score values and each user can use all functionalities up to a total score. Open source solutions are also popular among users. If Grid users can find an application that suits their needs and that does not require a cumbersome license, they will use it. Software vendors can’t ignore the open source movement. Hybrid models offer many advantages, defining the line between what is free and what is paid for, is the critical component of any open source strategy.

As of pricing, users usually pay for an annual one-time license and an 18-25% maintenance fee (but there is an increasing demand for the ‘pay per use’ option for overloads). The most widely used pricing structures are per-seat (system, server), per-CPU and per-concurrent-user models. Conventional per-CPU, per-seat and per-job license management models and pricing structures are problematic and quite expensive for users seeking to run commercial applications on top of Grid, web services or similar technologies, so custom-contract based models have become the
opted solution. Now, vendors are more and more heading to a customer value-oriented pricing model based on (and limited to) reliable metrics in HPC and Grid. Pure utility pricing is still a complex issue since there is no one clear utility metric that is of universal value to customers. However, some vendors implement utility pricing on a case by case basis.

As an important input for this report and a starting point for the next one about new business models for software licensing, we have briefed several large and small software vendors, application service providers and end user organizations to help us understand the current licensing practices and market needs. Different business sectors were covered, such as IT industries, mechanical industries (automotive, aerospace), electronics, financial service industries and media. The findings of these questionnaires are used all along the report, nevertheless, sections 5 and 6 explicitly provide a summary of the information obtained for each of the questions. As a general observation, the answers obtained were highly diverse and sometimes even contradictory. Often there is a mix of licensing and pricing models used that makes the panorama even more confusing. The situation also varies depending on the industry vertical we have under analysis. What we can say is that there are some basic licensing rules that can be considered as general on the market.

Software licensing is both a technology and a business concern, but the business issues are the most problematic ones. Licensing must offer reliability and flexibility to the user and its cost must be low compared to the value of the license. Customers want flexibility and they want vendors they can partner with. Vendors do not vote for a reduction in revenue, however, there must be some additional value to the user, such as being able to move a license around. So, what is expected is an evolution, more than a revolution. Where major vendors go, the market will follow. Models supporting Grid-like technologies might vary, but some form of measured usage will likely be employed.

This report is the basis for deliverable D2.2 about new licensing scenarios and related business models, and also an important part of the commercial exploitation of smartLM.