

# D2.2

Business impact on the adoption of Grid licensing mechanisms and suggested business models

Version 1.0



## WP 2 New Business Models

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# Abbreviations

<b>API</b>	Application Programming Interface
<b>ASP</b>	Application Service Provider
<b>CC</b>	Consulting company
<b>CPU</b>	Central Processing Unit
<b>D1.1</b>	SmartLM Deliverable 1.1
<b>D2.1</b>	SmartLM Deliverable 2.1
<b>DSW</b>	Dependant Software Vendor
<b>FC</b>	Final customer
<b>ISV</b>	Independent Software Vendor
<b>HWP</b>	Hardware Provider
<b>HPC</b>	High Performance Computing
<b>IT</b>	Information Technologies
<b>IP</b>	Internet Protocol
<b>IPR</b>	Intellectual Property Rights
<b>LAN</b>	Local Area Network
<b>LSP</b>	License Service Provider
<b>MPI</b>	Message Passing Interface
<b>OSS</b>	Open Source Software
<b>SaaS</b>	Software as a service
<b>SmartLM</b>	Grid-friendly software licensing for location independent application execution
<b>UC</b>	Use case
<b>VAR</b>	Value Added Reseller
<b>WAN</b>	Wide Area Network
<b>WP</b>	Work package

# 1. Executive Summary

Traditional licensing practices are under pressure from a variety of alternative options (SaaS, open source, low-cost development environments, Chinese software companies, etc.) and are tightening vendors' profit margins, pushing down licensing costs and giving more negotiating power to users.

Licensors may expect licensees to buy additional licenses for each processor that executes the licensed software (multiplied software fees). This is definitely not viable in a Grid or Cloud context. Why should users pay many times for the same software? It is clear that new usage-based models are needed where customers are charged for useful, measurable units, relevant to the software they are using, and are allowed to flexibly select the best model for their environment.

Naturally we can't disregard the fact that software vendors' will fight tooth and nail in order to maintain (and increase) their revenue, so we won't revolutionize the entire software licensing market, but we can try to fill in some gaps and improve current conditions favouring Grid-like technologies and trying to reach a win-win situation between vendors and users.

We think that the role of the ASP can be very important from both angles (vendors' and users'), a role that is evolving and expanding, while bringing along solutions to specific shortcomings, reselling hardware, software and services. We have identified five cases that companies may most frequently encounter in real operations.

When customers do not want to fight for budget to acquire new hardware, they can choose to transfer their private application license through a secure mechanism to the environment of the ASP, while still physically owning what they paid for but with the capability to dynamically reassign the usage grant. Another case is, when the final customer needs special software for a specific task. This situation calls for the appearance of a DSV (Dependant Software Vendor) who embeds the ISV's license in its new template (creating new special software) and commercializes it through the ASP, in a way that the ISV trust the DSV and be assured that the DSV can access only those parts of the application for which they are granted access. In the third case, a consultant owns a license and deploys it at the ASP for the realization of a specific project for the final customer. The original license needs to be re-directed. In the fourth ASP case, the customer license housing- is enhanced in a way that it allow users to complement the licenses they have bought already from the ISV with additional licenses from the ASP. Furthermore, it may also happen that the ASP simply resells the ISV's license for external use, in some cases providing different contract terms. This generates additional business to the ISV. It can occur because the ISV wants to reduce the number of its direct accounts, or wants to reduce the risk of non-payment, among others. Also, small ISVs can access the market easier, this way, with the confidence to host their applications in an ASP environment without having to worry about losing their intellectual property. Making use of economies of scale and SmartLM features, the ASP can make existing models attractive to end users as well as introduce new ones that ISVs are not willing to offer.

In addition to the ASP scenarios, we propose further business models that may or may not involve the ASP, but they do fill in current gaps in software licensing.

In our second scenario, the proposed license extension model enables end users to use their rented licenses with additional pay-per-use licenses in their local environments. This business model allows users to extend their licenses in time, in their Local Area Network (LAN) on

demand (e.g. for workload peaks). The new SmartLM licensing service addresses the weaknesses of the existing processes for license extension. The License Server takes care of the extension of the license automatically. It enables a budget control strategy that limits the total costs but allows a flexible extension of licenses under specific circumstances. Security mechanisms are implemented based on high level security web standards. SmartLM also takes care of the 'breakeven point' issue, accounting the point when it is cheaper for a customer to rent an additional license instead of paying for an additional one.

One of the major problems today is that most contracts between ISVs and end users limit the license usage to LAN. It is obvious that this approach contradicts the Grid idea as this way we are not able to use licenses from different locations. Naturally, a worldwide acting company needs licenses that can be dynamically used all over the world. SmartLM aims at overcoming the legal and technical limitations of current licensing mechanisms and show the benefits for all involved parties. We call this model 'license aggregation', a model that we also mention among the ASP scenarios, but from a different perspective. The correct identification of the end user's location and the license source is critical for this new business model.

In our last scenario we try to overcome a major paradigm in software licensing. With this new approach, the license price becomes effectively independent of the underlying hardware. It is a pricing/accounting model that specifies a way to charge for the use of a license. Within the currently established paradigm, on-demand licensing would benefit those with faster hardware (as for a given amount of time, prices are fixed in advance). What we propose is to fix a price on a linear scale against a pre-defined reference point – the profiling system. The profiling is done by the ISV to formulate the application performance in terms of micro-benchmarks. The reference price model is negotiated between end user and ISV, DSV or ASP. The final price will always be a weighted reference price. This way, vendors get their revenue by charging for the real use of their applications while offering more fair conditions to the users enabling a cost-efficient usage of the sold licenses. Based on the initial micro-benchmark idea, we go further and define a more general approach called feature-based accounting.

As said before, we don't offer a revolution here, but certainly an evolution –in some cases quite disruptive- of the current situation. For this, we have taken into account the different requirements of the parties involved. In the context of current technology and market trends, we try to offer flexibility and fair conditions to the users without forcing the vendors to reduce their revenue.