

CLOUD SERVICES: A SOLUTION FOR SOFTWARE PIRACY

Intellectual property laws and educational campaigns have had limited success in controlling software piracy. As cloud-based software services are immune to piracy, the solution might lie in the cloud



The software industry is expected to generate nearly US\$ 1 trillion in revenue by 2016. Today, it employs millions of people and generates significant tax revenue – without any other externalised costs.

Software is usually distributed on disc and installed on a PC. As it sits on the PC, beyond the purview of the software vendor, it can be hacked and copied to other PCs – with no remuneration for the software vendor.

How can we reduce the negative effects of software piracy on the public good?

Large software vendors believe that strong Intellectual Property laws secure an equitable ROI, as most (link: <http://goo.gl/krFFp>) reside in the United States, United Kingdom and Japan, countries with strong copyright, patent and trademark laws.

Software industry alliances also sponsor campaigns to educate customers on license compliance. But have you tried to read a software End User License Agreement with its Terms of Service? People generally want to do the right thing, but when the burden of interpreting and applying these rules (i.e. compliance) far outweighs the convenience of copying a disc, piracy unfortunately wins.

But, even with IP laws and education campaigns, billions are still lost to piracy.

An article from the January 2010 issue of *Esri ArcWatch* (<http://goo.gl/XRtPP>) forecasts a “cloudy” future for ArcGIS: “Esri considers cloud computing and technology important in the development and vision of the ArcGIS platform.”

Cloud applications give vendors control over how their software is deployed and used, which can thwart piracy. So, perhaps now is the time to add some cloud to GIS software.

Pure cloud applications like Hotmail, Google Docs and Salesforce are unlike GIS applications which perform significant mathematical computations and render complex raster and vector content in real-time on high-resolution displays. These tasks are better performed on a PC.


Storage, database operations, upgrades and related activities can originate from the cloud. An example of a hybrid cloud / PC approach is Google Earth, which combines the best of the PC and the cloud.

The cloud introduces security and privacy risks and exposes the application to unplanned outages. The customer will tolerate these risks, if compensated with lower prices, extra features or other conveniences. A customer might see the cloud as an incursion, if it serves only to monitor or enforce license contracts.

The cloud must extend the value of the software in a natural and obvious manner, and should deliver real tangible results to both vendor and customer. From this perspective, Apple OS X Lion’s iCloud is “good cloud” because it lets customers share music and other files across multiple devices; Windows 7 licensing service is “bad cloud” because it offers a consumer nothing.

The cloud also introduces a “network effect” that software can access through collaborative services. If the mere increase in the number of users of your software implicitly increases its value to the customer, this acts as an incentive for the customer to purchase more licenses for more users.

Traditional solutions to piracy, like copyright law, education and related industry initiatives, have had limited success. As cloud-based software services are immune to software piracy, the solution to piracy might lie in the cloud.

GIS software should be redesigned to include both fixed assets, which reside on the PC, and cloud assets delivered over the Internet. With a flexible pricing model that respects the diversity of users, vendors can deliver the best solution for their customers while thwarting piracy. 

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