

IP-centric intelligence for the Cloud Computing sector*

Abstract

The purpose of this document is to provide a detailed intellectual property analysis of “the Cloud Computing** sector”, in particular in relation to the patent portfolios of the leading organisations in the field. By comparing the relative patent portfolios of organisations in the sector – and their significant developments – a comprehensive overview of the Cloud Computing sector (as it stands in August of 2011) will become clear.

** This document was originally commissioned as a research piece to be used in an attempted (now abandoned) M&A project in the Cloud Computing field.*

*** The definition of “Cloud Computing” has been subject to much debate and is still, to a large degree, fluid. For this reason, the area considered in this document will likely not match your own accepted definition of the “Cloud Computing Sector”, but the analysis contained herein may still nevertheless be extremely useful.*

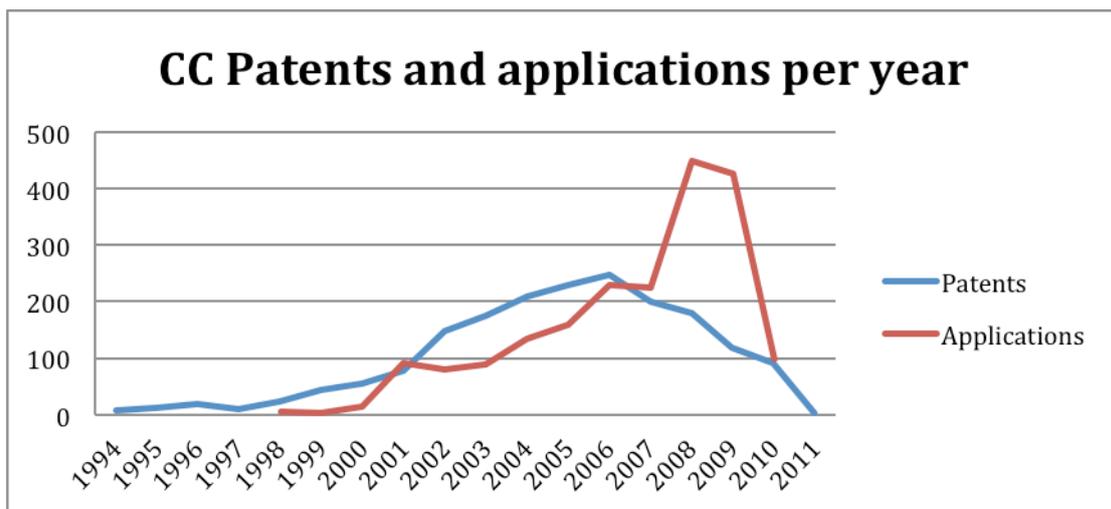
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3. The IP holdings (patents, applications) of those organizations

Our detailed analysis of the United States Patent and Trademark Office (USPTO) records tell us that there are approximately 1,800 granted Patents and 2,000 pending Applications that can be considered to be manifestly CC in nature. Since 1994 – which effectively marks the advent of CC at the USPTO – the trend in Patents and Applications has been as described by the following graph:

(Graph G1)



In order for us to arrive at a broad view of the relative IP strengths of organisations in the CC sector, it is thus instructive to consider the present IP holdings of those companies and service providers.

76	6625751	2003	ORACLE
77	5511217	1996	HITACHI
78	5878142	1999	INFORMATION RESOURCE ENG
79	6003050	1999	MICROSOFT
80	6647393	2003	MANGOSOFT
81	6745327	2004	Individual inventor
82	5434974	1995	IBM
83	7174370	2007	Individual Inventor
84	7263593	2004	HITACHI
85	7035944	2003	IBM
86	6453392	2002	IBM
87	7233985	2004	APPLE
88	6138249	2000	EMC
89	6108712	2000	IBM
90	6170083	2001	INTEL
91	6282702	2001	ORACLE
92	6934799	2003	IBM
93	6349344	2002	MICROSOFT
94	5999988	1999	ORACLE
95	6751658	2004	APPLE
96	6085120	2000	IBM
97	6799195	2004	INVENSYS
98	7082464	2003	JUNIPER NETWORKS
99	5826000	1998	ORACLE
100	7577722	2009	VMWARE

is also worth bearing in mind the relatively new IP power bases in Asia, and their own growing portfolios of seemingly valuable CC patents²¹.

5.3 Non-Practising Entities (NPEs)

The question thus presents itself: do NPEs pose an unusual and particular threat to the future of the CC sector?

The answer from much of the CC blogosphere²² seems to be a resounding Yes, not least because the accessible nature of CC (and the huge change to market access it potentially affords market outsiders) will become an unavoidable problem for the current IT giants – as has quite correctly been pointed out²³ elsewhere, companies who have traditionally been “the customers” will inevitably morph into “the competition”. As they do so, quality CC Patents will become highly prized. And in markets where Patents are highly prized, NPEs sense an opportunity...

The seeds for this issue were of course sown when the USPTO originally decided to allow patents for software in the early 1970s. Whilst it may be unfair to say that NPEs or “trolls” are avidly waiting for CC to take off, it is certainly true to say that the scramble of assertion over the last 2 years in the mobile phone sector is very probably a taste of things to come.

Given the incredible rate at which, for example, IBM and Microsoft generate patents (5,896 and 3,094, respectively, in 2010), it is highly likely that one or more companies will perceive themselves as owning the “definitive” CC patent (or group of patents) and will seek out court in order to prove it and realise considerable damages. (And this before any consideration is given to NPEs (and PEs) who may

Endnotes

¹ <http://www.focus.com/briefs/hosting-bandwidth/top-10-cloud-computing-trends/>

² See, for example, this brief and clear analogy:

http://www.ebizq.net/blogs/saasweek/2008/03/distinguishing_cloud_computing/

³ Cloud computing trademarks filings have increased at an exponential rate since 2007, see:

<http://insidetrademarks.com/2010/03/24/cloud-computing-trademark-trends/>

⁴ With due respect for Open Source innovation.

⁵ <http://www.windowsitpro.com/article/cloud-computing2/The-Rise-of-Cloud-Computing/2.aspx>

⁶ Considered a very risky move at the time, see:

http://www.businessweek.com/magazine/content/06_46/b4009001.htm

⁷ <http://www.nytimes.com/2007/10/08/technology/08cloud.html>

⁸ <http://www.networkworld.com/newsletters/itlead/2008/070708itlead1.html>

⁹ <http://itmanagement.earthweb.com/netsys/article.php/3884311/Ten-Cloud-Computing-Leaders.htm>

¹⁰ <http://www.telegraph.co.uk/technology/microsoft/7374983/Microsoft-staking-its-future-on-cloud-computing.html>

¹¹ This report presents and analyses the patent landscape for CC. Patent landscapes are not a perfect picture, primarily due to the imperfection of the class code system and the multitude of terms which can be used to describe CC. Our report has been based on US patents only, as per the requirements of the M&A project which initiated it. Our search strategy was based on a combination of keyword terms and class codes. The keyword search was carried out on the title, abstract and full text of the patents and applications. Keywords included "cloud computing", "internet based computing", "on-demand services", "distributed-computing", "virtualization", "virtual-machine", "web services", "net-booted". The list was then further filtered by Exponent IP consultants, who reviewed all results and rejected all non-relevant patents and applications. The search was carried out in May 2011.

¹² http://www.prweb.com/releases/GTT_Group_Patent/Cloud_Computing/prweb8378290.htm

¹³ <http://www.hpcwire.com/hpcwire/2010-10->

15/massively_parallel_technologies_expands_patent_portfolio_to_420_claims.html

¹⁴ <http://www.physorg.com/news196752892.html>

¹⁵ http://news.cnet.com/8301-13860_3-20012674-56.html