MARKET ANALYSIS

Worldwide Requirements Definition and Management 2008–2012 Forecast and 2007 Vendor Shares: Revamping Collaboration to Drive Business Decisions

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IDC OPINION

This forecast marks the second time that IDC has assessed the requirements definition and management software market, which resulted in a worldwide 2007 sizing of $191.3 million, up 12.5% from 2006 market sizing of $170.1 million. We predicted last year that the market would grow to $379 million by 2011, achieving a huge 17.4% compound annual growth rate (CAGR) for 2006–2011 (on a tiny initial base revenue). However, we have drastically reduced both those estimates and the overall CAGR in the face of extremely challenging financial climate down to a mere $265.9 million in revenue by 2012 and an overall CAGR of 6.8% for the period from 2007 to 2012, with some growth but significantly less. Highlights remain as follows:

- ☑ The year 2007 saw growth of 12.5% from 2006, with lesser but still ongoing basic growth predicted throughout the forecast period.

- ☑ The increasing complexity and criticality of software applications and systems and the unremitting business pressures for software relevance, adaptability, compliance traceability, quality, productivity, and faster time to market will continue to drive demand for interactive requirements solutions. Nonetheless, vendors must demonstrate usability and relevance in what will be a struggling IT spending environment.

- ☑ The integration or acquisition of formal requirements management systems is an important contributor to SCM market growth and coordination with ASQ, IT governance, and IT project portfolio management. IDC research continues to show flawed requirements as a leading cause of failure in new applications. Strong requirements can help improve software quality and feed prioritization for project portfolio and change management. In the current difficult economy, this will be critical for businesses struggling to do more IT work with steep declines in available staff (in the wake of mergers, acquisitions, and layoffs).

- ☑ The need to support requirements across geographically distributed teams continues as a major driver for large enterprises with distributed IT organizations.

- ☑ Emerging life-cycle needs for requirements for services will drive growth moving into the forecast period. Web 2.0, security, and composite applications will also drive requirements evolution through the forecast period. Indeed, IBM Rational acquired Watchfire in June 2007, and HP also acquired SPI Dynamics in 2007 (indicating ongoing application life-cycle management [ALM] confluence with security).

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This study examines the requirements definition and management market for the period from 2005 to 2012, with vendor revenue trends and market growth forecasts. Worldwide market sizing is provided for 2007, with trends from 2005. A five-year growth forecast for this market is shown for 2008–2012. Revenue and market share of the leading vendors is provided for 2007. This study also provides profiles of leading vendors and identifies the characteristics that vendors will need to be successful in the future.

Methodology

See the Learn More section for a description of the forecasting and analysis methodology employed in this study.

In addition, please note the following:

☑ The information contained in this study was derived from the IDC Software Market Forecaster database as of November 18, 2008.

☑ All numbers in this document may not be exact due to rounding.

☑ For more information on IDC's software definitions and methodology, see *IDC's Software Taxonomy, 2008* (IDC #210828, February 2008).

Requirements Definition and Management Market Definition

SCM tools are used by application development organizations to provide software revision control and versioning capabilities. More sophisticated functions such as process management, change request tracking, requirements management, and distributed team development support may also be included. Requirements management and definition software is a competitive segment of the overall SCM market. For requirements definition, vendors in this competitive market category provide products that enable users to elicit, specify, analyze, and validate requirements, typically through an iterative process that includes business stakeholders and technology staff. Requirements management enables users to track progress and trace evolution of requirement creation from software development through to production testing. Products in this overall category range from "traditional" requirements management tools to requirements automation products with simulation visualization and/or storyboarding capabilities to facilitate communication between business stakeholders and developers.

SITUATION OVERVIEW

The Requirements Definition and Management Market in 2007

IDC has seen increasing focus and growth of the requirements market over the past several years, along with tighter integration between requirements automation tools and other application life-cycle management phases (such as testing and change management). Effective requirements definition and management practices drive software development project success — or more typically, poor requirements and inadequate communication drive irrelevance and failure. Given the visceral impact of requirements on the application life cycle and its increasing role, IDC is sizing this market apart from the overall SCM market (in which requirements revenue resides for IDC). IDC assesses the overall market at $191.3 million in 2007, up 12.5% from $170.1 million in 2006. The market grew year over year because of significant growth of dominant player Telelogic and decent growth from others.

IBM Rational's 2Q07 announcement of its intent to acquire Telelogic and finalization of that acquisition dramatically consolidated and shifted the overall requirements landscape as that deal closed (1H08). (Since this share document is for 2007, the Telelogic revenue is not yet bundled in with IBM's for this analysis.) Yet significant entries from innovative smaller vendors will continue to sustain growth, in conjunction with the essential drivers pushing the market forward — outsourcing/offshoring, regulatory compliance issues, security and emerging Web 2.0 and service-oriented architecture, and related approaches to development and management. These will continue to sustain requirements growth throughout the remainder of the forecast period (2008–2012). IDC believes this growth will continue (though at significantly lesser levels than originally predicted) despite the economic contraction begun in 2008, which will hit hardest in 2009–2010.

To set context, it is important to remember that the vast majority of requirements definition and development and management is done outside the purview of these targeted, automated tools. Most users communicate basic requirements in Microsoft Word, Excel, Visio, and email; on scraps of paper; or even not at all. IDC is not seeking to size that portion of the market in this forecast.

Performance of Leading Vendors in 2007

Table 1 displays 2005–2007 worldwide revenue and 2007 growth and market share for requirements definition and management vendors. Telelogic is by far the dominant requirements revenue market leader, with 44.5% share, up from 41.7% share in 2006 and posting tremendous 19.8% growth, to $85 million for the year. Telelogic's primary focus is in technical markets, such as aerospace and telecommunications. IBM Rational has the second-place position in this market, with 20% share but practically flat growth of 1.8%. With IBM Rational's acquisition of Telelogic, IBM's position in this space will expand dramatically for our upcoming forecast 2008 vendor share (1H09) because the majority of revenue for Telelogic is in requirements rather than SCM. Indeed, IBM's decision to acquire Telelogic was in part driven by its position in the requirements space. Yet, neither Telelogic's DOORS requirements management product nor IBM Rational's RequisitePro offers intuitive product capabilities,

visualization, or simulation to provide support business/IT communication for what IDC defines as requirements definition. (Telelogic did attempt to make its product more intuitive with a release in 2Q07.) IBM has made a series of announcements with regard to requirements and Jazz with Method Composer that we expect will position it better for 2009.

TABLE 1

Worldwide Requirements Definition and Management Software Revenue by Vendor, 2005–2007 ($M)

	2005	2006	2007	2007 Share (%)	2006–2007 Growth (%)
Telelogic AB	67.2	71.0	85.0	44.5	19.8
IBM	36.8	37.5	38.2	20.0	1.8
Borland	24.0	29.0	30.3	15.9	4.8
iRise	5.6	11.5	12.6	6.6	9.6
Compuware	3.1	4.6	4.7	2.5	2.2
Serena	0.9	1.7	2.4	1.3	43.0
Blueprint	0.9	2.1	2.3	1.2	9.5
Ravenflow	0.0	0.5	0.5	0.3	9.4
Subtotal	138.5	157.8	176.1	92.1	11.6
Other	9.0	12.2	15.2	7.9	24.1
Total	147.5	170.1	191.3	100.0	12.5

Source: IDC, December 2008

Borland's third-place position is showing at 15.9% share (down from 17%), with $30 million in 2007 revenue and basic 4.8% growth. We expect Borland's summer announcements (2Q08) and push into the agile development arena to sustain Borland in 2008. Both Borland and Compuware have sought to link requirements definition and development capabilities with requirements-based testing to improve the quality of requirements themselves and more effectively drive test management.

iRise experienced decent growth of 9.6% in 2007, as it continues to effectively target a key area of business communication with requirements visualization and simulation capabilities. In this way, business stakeholders have visibility into the application user interfaces (UIs) and aspects of business processes and workflow implicit in application design. iRise's approach is attractive and easily adoptable. iRise has also

launched Catalyst, a collaborative network for iRise users and requirements professionals. The key challenge for iRise is management and reuse of the artifacts created in iterative JAD sessions, which we expect will be addressed in upcoming versions.

Compuware's acquisition of Ireland-based requirements definition vendor SteelTrace (1Q06) positioned the company to combine its testing and intuitive requirements approaches for requirements development. Renamed Optimal Trace, Compuware's product also experienced decent but minimal growth on a very small base, which we expect to continue into the 2008 forecast.

Blueprint — formerly Sofea — revamped its Profesy product and relaunched the company in 2Q07. Blueprint is already experiencing growth on tiny base revenue numbers, and we expect the relaunch to have positive impact that began with 9.5% growth in 2007 and will extend into 2008.

Serena, whose entry into the requirements arena was driven by its technology acquisition of Integrated Chipware's RTM and also of Apptero, markets two products associated with those acquisitions — Serena RTM and Serena Composer — targeting the requirements management and definition markets, respectively. For RTM and requirements management, Serena refers to integration with its change management capabilities. Overall, requirements is currently a subsidiary focus for Serena, indicated by its low revenue base (1.3% of revenue totals), though with excellent growth on that small base.

Ravenflow, with unobservably low revenue in 2005 of $20,000, is emerging with its focus on parsing English language text to structure requirements, find errors and missing requirements, and help gain stakeholder buy-in. Ravenflow also grew 9.4%.

IDC sees additional ALM vendors such as HP Software creating and improving its own basic requirements capabilities in close integration with its testing products and continuing to partner for greater functional depth for requirements. Canadian-based SCM vendor MKS also has created requirements capabilities that are closely linked to its SCM product. Neither company sells or breaks out requirements revenue separately so that revenue is not visible in this study.

Indeed, the link between requirements and testing and requirements and change management tools is a key demand area for users seeking to improve both quality and code management in increasingly disparate environments.

FUTURE OUTLOOK

Forecast and Assumptions

Effective communication between business stakeholders and their IT counterparts is more critical than ever to create software for business success and agility. This is particularly the case as complexity levels increase exponentially for global businesses and software development. Innovation for businesses is key to survival in a difficult economy, and margins for error and poor execution are small. The impact of poor

requirements gathering typically leads to software project failure through inadequate responsiveness and business irrelevance. The software market for requirements management tools has shifted significantly over the past 12–36 months with the entrance of more intuitive niche requirements definition tools (including simulation and visualization capabilities), emerging new releases from standard application life-cycle management vendors, and closer integration of requirements with other life-cycle management tools. Savvy and adept Global 2000 organizations are beginning to take advantage of the improvements to requirements, quality, and overall performance involved with coordinating key application life-cycle phases. Findings include:

☑ Poor process and organizational strategies as well as tools that are difficult to use have presented significant challenges for businesses to improving requirements. It is challenging to get stakeholders to take the time to communicate effectively with business analysts and IT staff; the emergence of more intuitive tools that are usable by business executives in conjunction with analysts to capture and codify requirements is a key step forward.

☑ Coordination of requirements with quality assurance tools early in the life cycle can improve requirements and, similarly, the quality of scripts and tests being run to create effective, resonant requirements. Coordination with change management enables better prioritization of change requests; each action is an example of confluence.

As business analysts, stakeholders, and IT teams seek to collaborate on software requirements, they often struggle, even when commitment to collaboration exists, and these groups use their best efforts to connect with one another. Organizations remain stymied by the cultural divide that exists across groups and poor common communication vehicles, as well as process and organizational issues. (These include lack of availability and lack of engagement by key business stakeholders.) As a result, IT all too often creates projects that are irrelevant and can hamstring the business and impair competitive success.

IDC expects the intuitive capabilities of vendors such as iRise, Compuware, and others to be emulated and adopted by established requirements management vendors as part of suites of application life-cycle management products. This is already beginning to occur with Borland's Caliber DefineIT product release (2Q06) and Compuware's SteelTrace acquisition (2Q06). iRise earlier last year announced integration with IBM Rational's products (1Q07). During 1H08, iRise and Ravenflow announced integration with IBM Rational's Jazz collaboration platform and its Rational Team Concert product (with ClearCase and ClearQuest Software Configuration and Change management products). Telelogic — prior to its IBM acquisition — sought to improve the usability of its product with release 7.0 in 1Q07 (although graphical support remains in the offing). IBM Rational also announced the rational Method Composer in 2H08. HP Software has significantly enhanced its requirements management product offering to include three-way traceability and risk- and value-based testing in version 9.2, which became generally available in May 2007, and additional capabilities in 1H08,.

Key to success with the more intuitive products is strong management and browsing capabilities, which are insufficient typically. It's also a helpful beginning but not

enough to have clear definition alone; users need good management of requirements. For IT to deliver maximum value to the business or a product development team, it needs processes and tools to help capture, manage, and analyze the customer needs. This enables better, informed decisions about what to build based on the relative value of the requirements (and maximizing value in relation to development costs). How can IT and the business effectively elicit requirements and then control the evolution and churn to those requirements during project execution? Greater coordination between requirements tools and SCM and life-cycle management (which we see beginning to occur with smaller ALM vendors such as MKS and others) is a push in that direction. Support for agile processes is also key. The real goal should be to promote active stakeholder participation on teams. Agile development promotes the idea of frequent interaction between stakeholders and developers. The goal shouldn't be to merely document requirements; it should be to understand them and communicate effectively. Cutting the feedback cycle by delivering working software on a regular basis is key to success.

This overall approach can enable users to leverage existing requirements artifacts and becomes helpful in the context of potential reuse for comparable projects. It also becomes more important with the evolution of SOA and services-based approaches to development.

Intuitive requirements gathering and evolution form the basis for successful software creation. As companies seek better collaboration between IT and the business, IDC expects additional products to emerge and existing players to further establish themselves. Reuse and the need to coordinate requirements with business services for SOA development will act as drivers to increase management capabilities for artifacts created during the requirements and visualization process. In addition, this information will become increasingly valuable to companies seeking to prioritize key IT initiatives, and it is already moving to other areas of product life-cycle creation and management.

Management of ideas, or "ideation" portfolio management, will increasingly become a factor for business success and innovation for products as well as software. Enabling effective collaboration across business stakeholders and those that facilitate their success will be a key driver for this market moving forward, driven by the factors described previously — complex sourcing, compliance, global competition, and SOA.

Software Configuration Management Forecast, 2008–2012

Worldwide

IDC's estimate of the growth of the requirements market through 2012 is presented in Table 2.

Table 3 shows the key assumptions underlying this forecast.

TABLE 2

Worldwide Requirements Definition and Management Software Revenue by Region and Operating Environment, 2005–2012 ($M)

	2005	2006	2007	2008	2009	2010	2011	2012	2007 Share (%)	2012 Share (%)	2007–2012 CAGR (%)
Geographic region											
Americas	74.8	86.3	97.1	104.4	110.5	116.3	124.2	134.2	50.8	50.5	6.7
EMEA	54.8	63.2	71.1	77.3	79.9	82.5	86.5	91.8	37.2	34.5	5.2
Asia/Pacific	17.8	20.6	23.1	27.2	29.8	32.5	35.6	39.9	12.1	15.0	11.5
Total	147.5	170.1	191.3	208.9	220.2	231.2	246.3	265.9	100.0	100.0	6.8
Operating environment											
Windows 32 and 64	85.7	98.8	111.2	122.7	130.5	138.0	148.3	161.2	58.1	60.6	7.7
Unix	49.6	57.2	64.4	66.4	66.8	66.9	67.4	68.9	33.6	25.9	1.4
Linux/other open source	9.3	10.8	12.1	16.2	19.4	23.1	27.5	32.8	6.3	12.3	22.1
Mainframe	2.8	3.2	3.6	3.6	3.4	3.2	3.1	2.9	1.9	1.1	-3.8
i5 and OS/400	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	-3.7
Total	147.5	170.1	191.3	208.9	220.2	231.2	246.3	265.9	100.0	100.0	6.8
Growth (%)	NA	15.3	12.5	9.2	5.4	5.0	6.5	7.9			

Note: See Table 3 for key forecast assumptions.

Source: IDC, December 2008

TABLE 3

Key Forecast Assumptions for the Worldwide Requirements Definition and Management Market, 2008−2012

	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Top assumption				
Economy	Worldwide economic growth will plummet in 2009, from 2.5% to 1.8%, as a result of the financial crisis that became agonizingly acute in September 2008. IDC believes that all economic forecasts at the moment are likely to be subject to change, so we have agreed to create IT forecasts based almost exclusively on those in the IMF World Economic Outlook published in October. Some highlights for 2009: United States— 0%, Western Europe — 0.2%, and Japan — 0.5%. The global economy is expected to return to 3.1% growth in 2010.	**High.** The economy is now a net inhibitor on IT spending. We expect almost all regions to experience economic shocks not just from slower demand, but also from tighter, more costly credit and from changing consumer and buyer behavior. While we continue to expect some growth in the requirements arena, it will be significantly less than previously forecast.	↓	★★★☆☆
Macroeconomics				
Profits	Consensus Economics estimates the U.S. profit growth to be negative in 2008 and 2009. IDC's assumption for the U.S. profit growth is -8% for 2008 and -3% for 2009.	**Moderate.** Company profits will not be enough to fund initiatives; new projects will require cutting costs, quick paybacks, and short implementation times. Requirements definition and management capabilities to enable successful execution will help support oversight during this challenging time. Nonetheless, IDC expects slower growth for ongoing purchases and maintenance support of existing requirements products during this time.	↓	★★★★☆

TABLE 3

Key Forecast Assumptions for the Worldwide Requirements Definition and Management Market, 2008–2012

	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Crisis duration	IDC assumes that the bailout plans will loosen credit beginning in 4Q08, which will begin to lubricate the global economy, and that housing prices will hit bottom in the second half of 2009 and 1Q10, after which the economy will begin a long, slow improvement.	**Moderate.** Without a bottoming out of the global economy in the first half of 2009, it will be hard for the 2010 economy to reach the level predicted by the IMF. Management of increasingly scarce human and financial resources will remain a survival capability for businesses in the 2009–2010 time frame, for those that have the process and organizational maturity to opt to consistent approaches and automation. In that context, we expect ongoing requirements adoption, though not at very high levels, to facilitate IT activity by those remaining.	↓	★★★☆☆
IT governance and regulatory compliance	Compliance is still driving some IT spending, including Sarbanes-Oxley, Basel II, and HIPAA. We don't expect compliance spending to crowd out other IT initiatives; in fact, compliance record keeping could spur initiatives in other areas as companies clean up their act. Increased attention to sound IT governance policies and compliance with regulatory requirements will drive an increased focus on storage and data management.	**Moderate.** Compliance and governance will have a positive impact on spending on software that aids in governance, risk, and compliance (GRC) and requirements management. Increases in regulations 2H09 and 1H10 in the wake of the financial crisis will support compliance spending in the 2010–2012 time frame and act as a driver for better management and GRC and some requirements adoption (to help ensure software compliance).	↑	★★★★☆

TABLE 3

Key Forecast Assumptions for the Worldwide Requirements Definition and Management Market, 2008–2012

	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Technology/ service developments				
Digital marketplace	The impact of the new digital marketplace can be seen in software as a service, integration of Internet and enterprise search and other functionality, the concept of "cloud computing," and competition for ad revenue between Microsoft, Google, and Disney. The digital marketplace will affect content delivery, commerce, datacenter architectures, advertising, marketing, telecom, and social interactions. It may also accelerate the consumption of ICT in emerging geographies, where more and more online populations reside.	**Moderate.** Look for faster development of the software-as-a-service model, more development of composite applications, and more directly competitive products (e.g., desktop search). Also, look for rapid growth of Internet advertising revenue in emerging geographies. Improvements to collaboration with social networking and digital content can help drive more effective decision making for requirements and change management via increased communication across business, IT, and operational teams.	↑	★★★☆☆
Service industry transformation	The rise of offshore IT services, the increased integration of IT services inside business services, and the advent of new service delivery models have created a new dynamic for IT services firms. Most firms have developed a multishoring capability and blended pricing model and are now working on ways to standardize on technologies and methodologies, deliver services online or in new form factors, invest in datacenters, and expand into business services. Despite the race to automate service creation and delivery, there is a looming talent shortage.	**High.** These trends portend more extreme competitive dynamics in the industry — offshore, onshore, software, and online services competing with traditional IT services — as well as new thresholds for delivery. Online delivery models and operational standardization, from new technologies to remote infrastructure services, will allow faster and more efficient translation of service labor to client deliverable. Requirements functionality can enable business change management and coordination across complex sourcing and also will be driven into engagements where standards have already been adopted and become the norm domestically.	↑	★★★☆☆

TABLE 3

Key Forecast Assumptions for the Worldwide Requirements Definition and Management Market, 2008–2012

	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Security	Software is becoming more rather than less vulnerable. Hackers and others continue to find ways to misuse other people's software. Initially, this was done by exploiting a vulnerability, but hackers are now finding ways to just misappropriate software without a vulnerability. In parallel, the attack vectors will move to focus on two new areas: application software, and of even greater concern, the hypervisor layer. Security software is more likely to be delivered as a service and/or a security appliance than bought as shrink-wrapped products.	**High.** The ability to bury malware within other software will become a dangerous trend that will lead to improved spyware software and increase the need for software and application security tools at software development and deployment in conjunction with SCM and code management. As changes to code introduce vulnerabilities potentially, requirements that incorporate effective security hygiene will increasingly become the norm up front for app dev. This will become of particular importance as organizations have fewer staff to deliver on projects and need to more effectively manage both requirements definition and prioritization of requests.	↑	★★★☆☆
Market ecosystem				
Channels	There will be no major changes affecting IT spending; however, we expect to see the importance of the ecosystem increasing. This is the result of the increasing need of customers for solutions that integrate point products and services across vendors, as well as the need for more vertical-specific solutions. Additional impetus will come from customer peer relationships in growing communities and microvertical channels (e.g., salesforce.com's AppExchange).	**Moderate.** Vendors will need to examine traditional supplier channel relationships and become more scientific about ecosystem decisions. This is all the more critical in a global economy where emerging markets internationally will be a key frontier for SCM adoption.	↔	★★★☆☆

Legend: ★☆☆☆☆ very low, ★★☆☆☆ low, ★★★☆☆ moderate, ★★★★☆ high, ★★★★★ very high
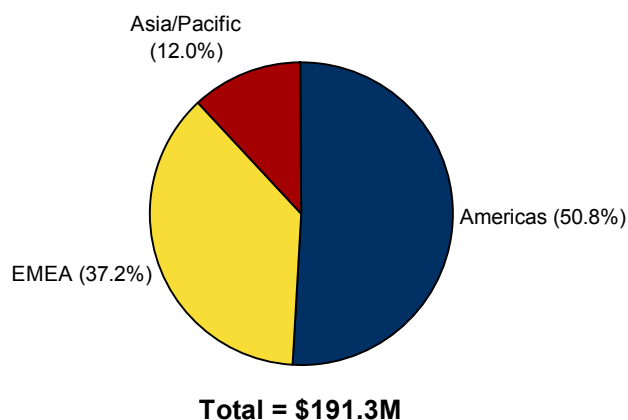
Source: IDC, December 2008

IDC's estimate of the growth of the requirements definition management market through 2012 is presented previously in Table 2). IDC expects the market to grow 9.2% in 2008 and only 5.4% in 2009. This is significantly down from the 2007 high of 17.7% and 18.5%, respectively, predicted in our December 2007 forecast, which, even on an extremely small base, will be completely undoable in the difficult economic climate we're now experiencing (with a severely challenged U.S. and global economy). We expect that growth to be merely 5.0% in 2010 but to then gather momentum and move upward for the remainder of the forecast period. The market is forecast to grow to merely $265.9 million by 2012, achieving a CAGR of 6.8% from 2007 to 2012.

Performance by Geographic Region in 2007

IDC analysts around the globe supplied regional input and insight into the requirements market forecast. The worldwide forecast is the aggregation of this regional data (refer back to Table 2). Revenue share for 2007 is shown graphically in Figure 1. Revenue for 2007 and 2012 is shown graphically in Figure 2. IDC expects to see the most significant growth in the Americas, followed by EMEA. However, support for requirements in Asia will grow (depending on software piracy rates) as the offshoring and outsourcing of applications grow commensurately in China in particular, augmenting existing requirements usage in India.

FIGURE 1

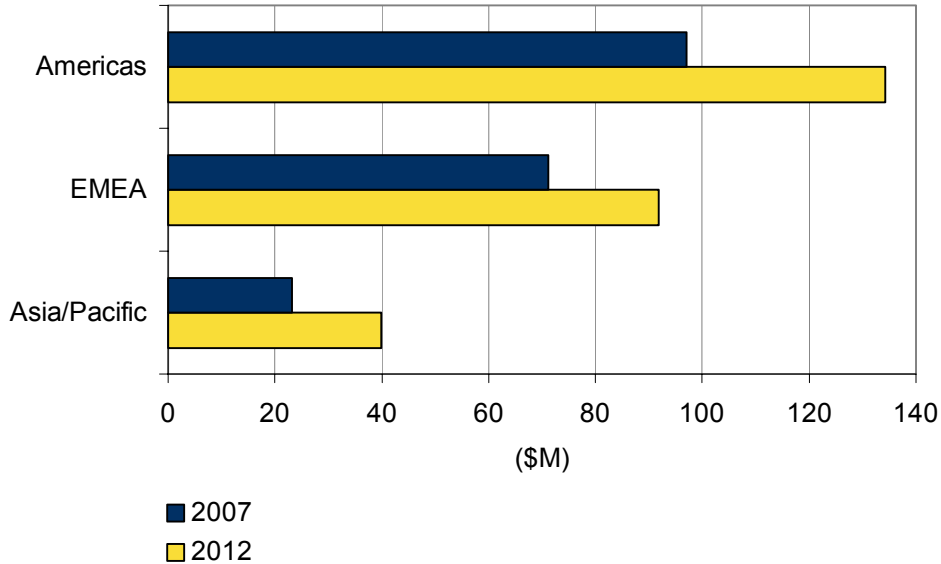Worldwide Requirements Definition and Management Software Revenue Share by Region, 2007

Total = $191.3M

Source: IDC, December 2008

Worldwide Requirements Definition and Management Software
Revenue by Region, 2007 and 2012

Source: IDC, December 2008

All areas show growth yet proportionally, we expect to see a doubling of revenue in the Asia/Pacific region, as a result of the increase of software development in the region and the commensurate need for requirements management. We also are beginning to see offshoring activities emerging in as yet largely untapped areas in Asia/Pacific, which will require commensurate investments in both requirements and SCM. While piracy remains a significant issue with regard to revenue generation, we expect at least this level of uptick in requirements revenue, even with significant economic challenges.
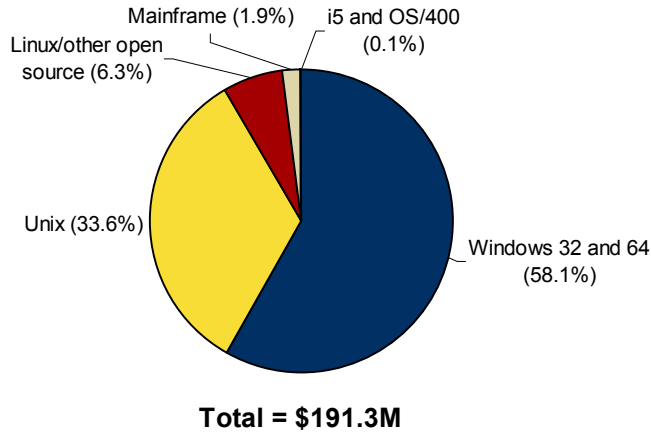
Figure 1 shows the Americas continuing as the dominant consumer of requirements tools, with 50.8% share, down from 58.4% revenue share in 2006. Western Europe was second, with 37.2% share, up slightly from 31.6% market share for 2006. Asia/Pacific grew to a 12.0% share, up from a 9.9% share in 2006. We expect to see ongoing growth in Asia/Pacific and particularly throughout the forecast period because of less weakness in the offshore and distributed outsourcing movement.

By Operating Environment

This study represents IDC's operating environment forecast for the requirements market through 2011. For the revenue forecast for the requirements market, segmented by operating environment, refer back to Table 2; revenue share for 2007 is illustrated in Figure 3. Revenue for 2007 and 2012 is illustrated in Figure 4. The primary operating environment for requirements is Windows, followed currently by Linux. Over time, we expect to see additional growth in Linux and ongoing dominance for Windows.
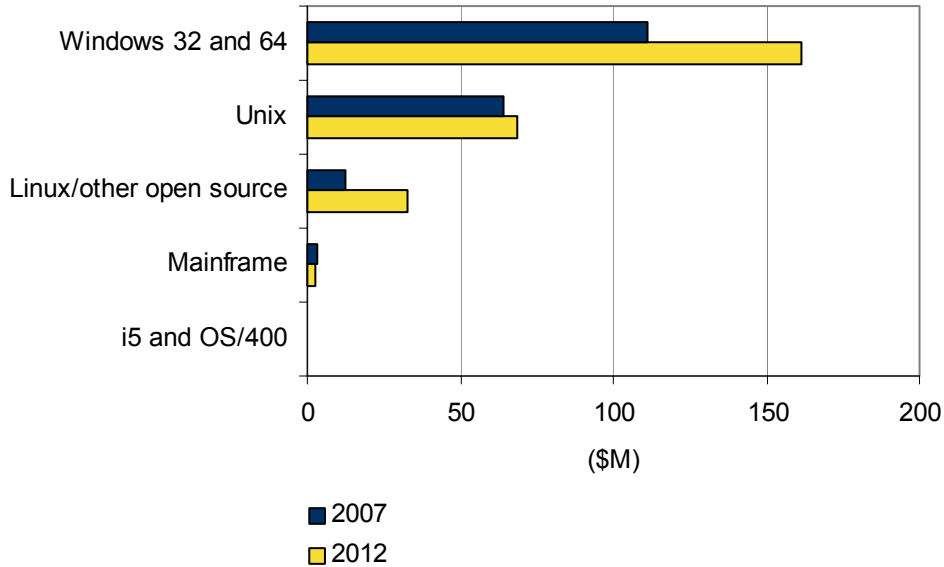
FIGURE 3

Worldwide Requirements Definition and Management Software
Revenue Share by Operating Environment, 2007

Mainframe (1.9%)
i5 and OS/400 (0.1%)
Linux/other open source (6.3%)
Unix (33.6%)
Windows 32 and 64 (58.1%)

Total = $191.3M

Source: IDC, December 2008

FIGURE 4

Worldwide Requirements Definition and Management Software
Revenue by Operating Environment, 2007 and 2012

Windows 32 and 64
Unix
Linux/other open source
Mainframe
i5 and OS/400

0   50   100   150   200

($M)

■ 2007
□ 2012

Source: IDC, December 2008

Windows continues to be the platform of choice for requirements tools, with a 58.1% share, up from 53.8% share in 2006 (refer back to Figure 2). Unix claimed second place, with 33.6%, up from 23.5%, in 2006. Linux continued to grow well, though it is still beginning to establish a presence in the requirements space, accounting for 6.3%. We expect growth for Linux over the forecast period, particularly as organizations seek to cut expenditures in a difficult economy. As some of the vendors supporting Linux have software-as-a-service licensing models, revenue may kick in gradually over the forecast period.

Market Context

IDC has consistently placed requirements definition and management revenue within the overall SCM marketplace. This makes sense because many of the SCM vendors also acquired requirements management tools and/or have begun to evolve them internally (e.g., IBM, Serena, and Borland and MKS for the evolution of some requirements capabilities). This connection also makes sense because prioritization of change requests ought to relate to key data about the value of those changes to the business that should be contained within the requirements tools. On the other hand, many of the requirements definition and automation vendors remain independent (e.g., iRise, Blueprint, and Ravenflow). And there is also a close linkage between test management and requirements, evidenced in Compuware's acquisition of SteelTrace (4Q05) and HP Software's evolution of additional requirements capabilities as part of its automated testing approach (3Q07 and 1H08) as well as HP's existing close partnership with Blueprint.

It is of value to compare the growth rates and forecast for requirements with those for SCM overall. IDC will continue to evolve its forecast model for requirements and will take into consideration market contexts that go beyond mere SCM (even as revenue for requirements will continue to be tracked within the SCM arena). Note that the overall CAGR for requirements definition and management is at 6.8%. Even in a contracting economy, the drive to push effective business requirements for software development (and other) projects is key and will drive some ongoing, sustained growth. The expansion in Asia in general and China in particular noted previously in the world growth figures also plays a factor here. See Table 4 and Figure 5 for this comparison.

TABLE 4

Worldwide Requirements Definition and Management Software Revenue, 2005–2012: Comparison of December 2007 and December 2008 Forecasts ($M)

|	2005	2006	2007	2008	2009	2010	2011	2012
December 2008 forecast								
Americas	74.8	86.3	97.1	104.4	110.5	116.3	124.2	134.2
EMEA	54.8	63.2	71.1	77.3	79.9	82.5	86.5	91.8
Asia/Pacific	17.8	20.6	23.1	27.2	29.8	32.5	35.6	39.9
Total	147.5	170.1	191.3	208.9	220.2	231.2	246.3	265.9
Growth (%)	NA	15.3	12.5	9.2	5.4	5.0	6.5	7.9
December 2007 forecast								
Americas	77.7	89.4	105.5	124.9	148.1	174.6	202.0	NA
EMEA	53.3	61.3	71.4	83.7	97.9	114.1	130.4	NA
Asia/Pacific	16.6	19.1	23.0	28.3	35.1	40.7	46.6	NA
Total	147.5	169.8	199.9	236.8	281.1	329.4	379.0	NA
Growth (%)	NA	15.1	17.7	18.5	18.7	17.2	15.1	NA

Notes:

See *Worldwide Requirements Definition and Management Software 2007–2011 Forecast and 2006 Vendor Shares* (IDC #210217, December 2007) for prior forecast.

Historical market values presented here are as published in prior IDC documents based on the market taxonomies and current U.S. dollar exchange rates existing at the time the data was originally published. For more details, see the Methodology section.

Source: IDC, December 2008

FIGURE 5

Worldwide Requirements Definition and Management Software Revenue, 2005–2012: Comparison of December 2007 and December 2008 Forecasts
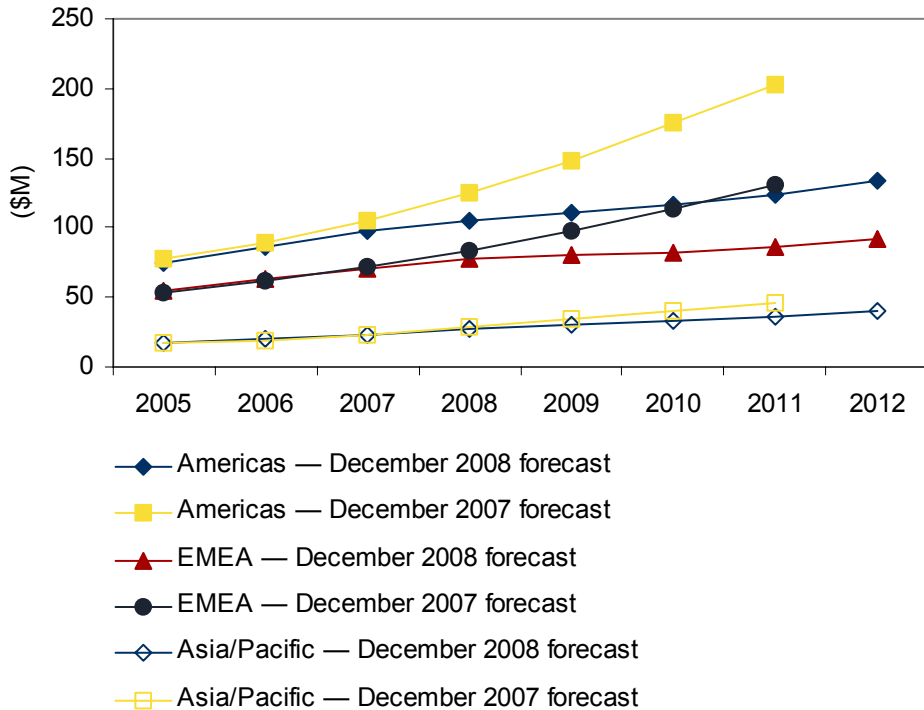
Source: IDC, December 2008

A five-year forecast (2006–2010) was published for the worldwide requirements definition and management market in *Worldwide Requirements Definition and Management 2007–2011: The Market Coalesces* (IDC #210217, December 2007). Table 4 compares the forecast published in that document with the current forecast in terms of worldwide revenue and annual growth rates. Figure 5 displays the same data in graphical form. At that point, the forecast was based on estimates that assumed significant uptake and growth for requirements on an extremely tiny base. However, the numbers in 2008 and projects moving forward do not support those kinds of projections into 2009 — although there will still be growth and acquisitions in this arena. We adjusted our forecast numbers down significantly in the context of the financial crisis facing the world currently. While we had originally predicted a CAGR of 17.4% in December 2007, our current forecast projects a CAGR of 6.8% over the forecast period. While we still expect growth to be positive for requirements definition and management, it will not be able to sustain anywhere near the levels originally predicted a year ago, and we will again revisit these growth numbers during the first quarter of 2009. We expect growth to be down particularly during 2009 and 2010.

ESSENTIAL GUIDANCE

As business analysts, stakeholders, and IT teams seek to collaborate on software requirements, they often struggle, even when commitment to collaboration exists and these groups use their best efforts to connect with one another. Organizations remain stymied by the cultural divide that exists across groups and poor common communication vehicles as well as process and organizational issues. (These include lack of availability and lack of engagement by key business stakeholders.) As a result, IT all too often creates projects that are irrelevant and can hamstring the business and impair competitive success.

Business users and IT should evaluate requirements definition and management tools as appropriate given the key focus for their markets. For highly technical product development, users should opt for requirements management tools. To support lean, iterative development and effective business/IT communication, users should evaluate and adopt requirements definition and development tools. Both require process and organizational change to support product adoption and evolution.

LEARN MORE

Related Research

- *Worldwide IT Project Portfolio Management 2008–2012 Forecast and Vendor Shares: Driving Portfolio Management to Address Economic Challenges* (IDC #214777, November 2008)

- *Worldwide Automated Software Quality 2008–2012 Forecast and 2007 Vendor Shares: Evolving Quality in a Challenging Market* (IDC #214433, November 2008)

- *Complex Sourcing Demands Effective Life-Cycle Management* (IDC #IcUS21416608, September 2008)

- *Coverity Builds Out Quality with Codefast Acquisition* (IDC #IcUS21318208, July 2008)

- *Sallie Mae Evolves Effective Change and Service Management: Setting a Baseline First to Establish Key Benefits* (ITMS #5591, July 2008)

- *Worldwide Software Configuration Management Tools 2008–2012 Forecast: Straddling Change in a Challenging Global Climate* (IDC #212315, May 2008)

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- *Oracle Reaches for Quality Acquisition with Empirix* (IDC #IcUS21161808, March 2008)

- *IDC's Software Taxonomy, 2008* (IDC #210828, February 2008)

- *Broadening ALM Reach for Virtualization*, IDC #IcUS21025407, December 2007)

- *Worldwide Requirements Definition and Management Software 2007–2011 Forecast and 2006 Vendor Shares: Market Coalesces* (IDC #210217, December 2007

- *Security and ALM — Acquisitions Presage Automated Integration, Heightened Security* (IDC #IcUS20897807, September 2007)

- *Worldwide Software Configuration Management Tools 2007–2011 Forecast Update and 2006 Vendor Shares: Managing Change in a Disruptive World* (IDC #207582, July 2007)

- *Worldwide Automated Software Quality 2007–2011 Forecast and 2006 Vendor Shares: Growing up in a Smaller World* (IDC #207580, July 2007)

- *Establishing Effective Build Management for Business Adaptability* (IDC #206782, June 2007)

- *Emerging Requirements Market Drives IT/Business Adaptability* (IDC #206209, June 2007)

- *Worldwide Software Change and Configuration Management 2007–2011 Forecast* (IDC #207052, May 2007)

Methodology

The IDC software market sizing and forecasts are presented in terms of packaged software revenue. IDC uses the term *packaged software* to distinguish commercially available software from custom software, not to imply that the software must be shrink-wrapped or otherwise provided via physical media. Packaged software is programs or codesets of any type commercially available through sale, lease, rental, or as a service. Packaged software revenue typically includes fees for initial and continued right-to-use packaged software licenses. These fees may include, as part of the license contract, access to product support and/or other services that are inseparable from the right-to-use license fee structure, or this support may be priced separately. Upgrades may be included in the continuing right of use or may be priced separately. All of the above are counted by IDC as packaged software revenue.

Packaged software revenue *excludes* service revenue derived from training, consulting, and system integration that is separate (or unbundled) from the right-to-use license but does include the implicit value of software included in a service that offers software functionality by a different pricing scheme. It is the total packaged software revenue that is further allocated to markets, geographic areas, and operating environments.

The market forecast and analysis methodology incorporates information from five different but interrelated sources, as follows:

- **Reported and observed trends and financial activity.** This study incorporates reported and observed trends and financial activity in 2007 as of the end of April 2008, including reported revenue data for public companies trading on North American stock exchanges (full-calendar-year 2007 data in nearly all cases)

- ☒ **IDC's *Software Census* interviews.** IDC interviews all significant market participants to determine product revenue, revenue demographics, pricing, and other relevant information.

- ☒ **Product briefings, press releases, and other publicly available information.** IDC's software analysts around the world meet with hundreds of software vendors each year. These briefings provide an opportunity to review current and future business and product strategies, revenue, shipments, customer bases, target markets, and other key product and competitive information.

- ☒ **Vendor financial statements and related filings.** Although many software vendors are privately held and choose to limit financial disclosures, information from publicly held companies provides a significant benchmark for assessing informal market estimates from private companies. IDC also builds detailed information related to private companies through in-depth analyst relationships and maintains an extensive library of financial and corporate information focused on the IT industry. We further maintain detailed revenue by product area models on more than 1,000 worldwide vendors.

- ☒ **IDC demand-side research.** This includes thousands of interviews with business users of software solutions annually and provides a powerful fifth perspective for assessing competitive performance and market dynamics. IDC's user strategy databases offer a compelling and consistent time-series view of industry trends and developments. Direct conversations with technology buyers provide an invaluable complement to the broader survey-based results.

Ultimately, the data presented in this study represents IDC's best estimates based on the above data sources as well as reported and observed activity by vendors and further modeling of data that we believe to be true to fill in any information gaps.

The data in this study is derived from all the above sources and entered into the Software Market Forecaster (SMF) database, which is then updated on a continuous basis as new information regarding software vendor revenue becomes available. For this reason, the reader should note carefully the "as of" date in the Methodology discussion within the "In This Study" section, near the beginning of this study, whenever making comparisons between the data in this study and the data in any other software revenue study.

Historical Market Values and Exchange Rates

Historical market values presented here are as published in prior IDC documents based on the market taxonomies and current U.S. dollar exchange rates existing at the time the data was originally published. For markets other than the United States, these as-published values are based on current dollar exchange rates (i.e., a different rate for each year). This means that historical market growth includes fluctuations in exchange rates, which can be significant.

Because many individual countries contribute to the regional totals, it is difficult to give precise differences between current and constant currency growth in this study. However, the scale of the difference can be understood from the movement of the U.S. dollar against major regional currencies. Customers should consider multiplying

regional historical market values for each year in this study by the change in value of the U.S. dollar against representative currencies in each region (e.g., the euro in EMEA and the Japanese yen in Asia/Pacific; see Table 5). This will provide a better approximation of local market growth in each region. For instance, the value in U.S. dollars of a market in 2006 in EMEA could be adjusted upward by 9% (reducing the 2006–2007 growth), while that in Asia/Pacific could be lowered by 1% (increasing the 2006–2007 growth).

Please refer to IDC's regional research studies containing historical forecast information for multiple countries for more accurate regional market growth in local currency constant values. Note that this discussion applies only to historical market values, not forecast values, which are always presented in constant dollars, because we do not forecast exchange rates.

TABLE 5

Exchange Rates, 2003−2007 (%)

	2003	2004	2005	2006	2007
EMEA					
Euro	121	110	110	109	100
Asia/Pacific					
Japanese yen	98	92	93	99	100
Latin America					
Mexican peso	99	103	100	100	100
Brazilian real	160	150	125	112	100
Canadian dollar	130	121	113	106	100

Note: To restate prior-year U.S. dollars in 2007 U.S. dollars, multiply historical market values by the percentage indicated in the table.

Source: IDC, January 2008

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