



INFORMATION TECHNOLOGY FOR EUROPEAN ADVANCEMENT

S/W Engineering Analysis

ITEA 2 Symposium – Exhibitors Forum, Paris, 6 October 2006
Daniel Pilaud

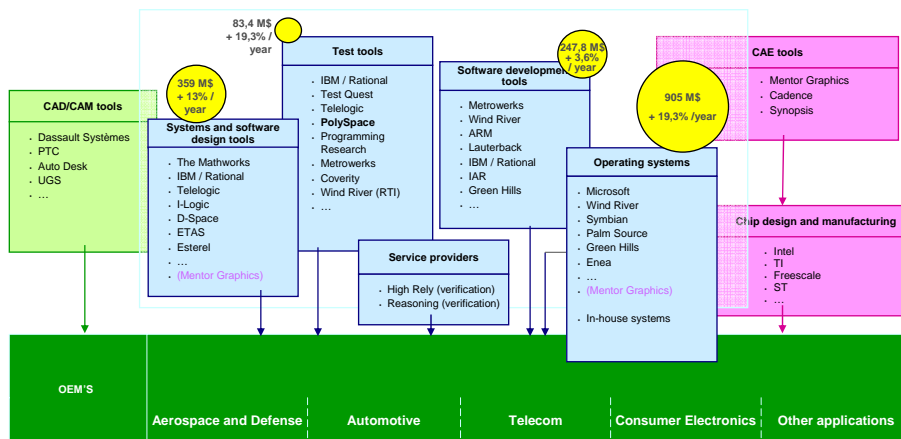


European leadership in Software-intensive systems and Services. The Future of Embedded and Distributed Software.

The S/W and Systems Tools Market Overview



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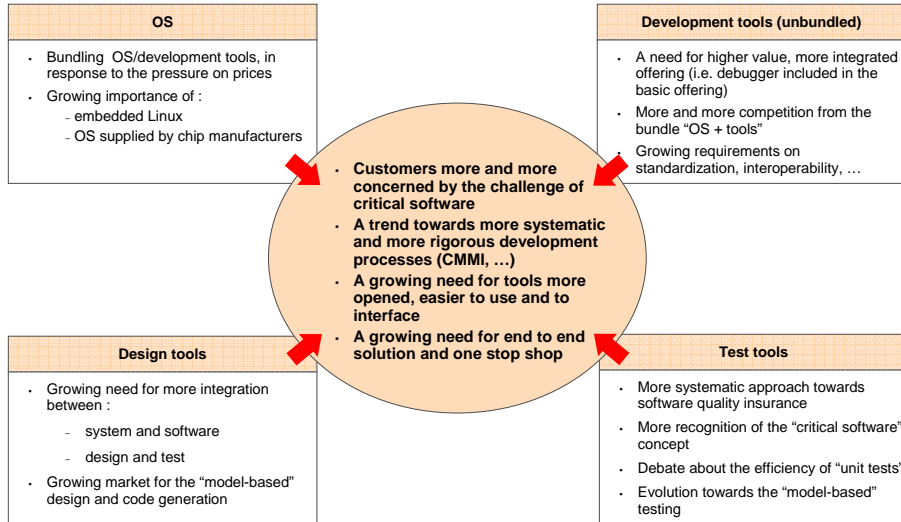


The S/W and Systems Tools Market

Main Trends



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(Sources : VDC July 2005, PolySpace's user-day, Polyspace managers knowledge)

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The S/W and Systems Tools Market

Market Potential



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Segment n° 1 (Red box) Segment n° 2 (Green box)

in M€	OS		Development tools		Design tools		Test tools	
	2004	2007	2004	2007	2004	2007	2004	2007
• AED	91	154 (+19,3%)	49	60 (+7,0%)	114	173 (+14,9%)	23	40 (+20,5%)
• Telecom / DataCom	178	267 (+14,6%)	59	74 (+7,7%)	66	92 (+11,7%)	14 ⁽¹⁾	24 (+19,5%)
• Automotive	29	54 (+22,1%)	37	46 (+7,9%)	111	162 (+13,5%)	14	25 (+20,9%)
• Consumer Electronics	378	729 (+24,5%)	46	57 (+7,6%)	15	21 (+12,0%)	13	24 (+21,3%)
• Others	229 ⁽¹⁾	332 (+13,2%)	57 ⁽¹⁾	39 (+7,0%)	53 ⁽¹⁾	71 (+10,0%)	19 ⁽²⁾	29 (+15,1%)
TOTAL	905	1 536 (+19,3%)	248	276 (+3,7%)	359	519 (+13,1%)	83	142 (+19,3%)

⁽¹⁾ of which 129 Industrial Automation ⁽¹⁾ of which 13 Industrial Automation ⁽¹⁾ of which 25 Industrial Automation ⁽¹⁾ of which ~7 M\$ for TestQuest
⁽²⁾ of which 8 Medical

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The S/W and Systems Tools Market Summary



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- Total S/W & System tool market size 1500M€
 - 905M€ Operating Systems
 - 247M€ Software Development Tools
 - 359M€ Software and Systems Design Tools
 - 83M€ Test Tools

S/W & System
Engineering
Tool Market Size
689M€

- Strong growth potential for all product segments, except development tools
- Good correlation between design and test tools, in terms of dominant applications (AED, Automotive)
- Except Telelogic, big players are US players
- European research teams are world class level

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S/W Engineering Facts & Figures ITEA Investments



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System & Software Tool Market

- The total Systems & Software Engineering Tool market size (excluding Operating Systems): **689 M€ / Year**

S/W & System Engineering Projects in ITEA (Call 1-8)

- Total number of ITEA projects: 86
- Total number of S/W & System Engineering Projects: 38 (44%)
- Total effort of ITEA projects: 10.989 PY
- Total effort S/W & System Engineering projects: 5.063 PY (46%)
- ITEA S/W & System Engineering project costs: **75 M€ / Year**

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The S/W & Systems Tool Paradox

- Industrial Companies
 - Seeking desperately for dedicated solutions for their company specific problems w.r.t. Productivity, Quality, Time To Market and Costs
 - Concerning tools
 - There are no tools available for their specific problems
 - General tools are difficult to customize
 - No tool support for long product cycles (20+ years in aerospace)
- Software Tool Vendors
 - Interested to develop general tools for a large market (better ROI)

The S/W & Systems Tool Paradox Consequences

- Industrial Companies
 - They join ITEA S/W & System engineering projects to a large extent developing dedicated tools, methodologies and technologies
 - Maintenance of the tools & technologies is at risk for the long term (not their core business)
 - Difficult to promote results internally to other operational divisions
 - No interest to commercialize the tools & technologies
- Tool Vendors
 - Reluctant to join ITEA projects to develop specific tools for small markets
 - Current ITEA projects do not fit their goals
 - Durability for the long term is at risk for the small companies

Recommendations

- Generate one or more critical projects in ITEA to focus specifically on key problems in the S/W Engineering domain. Get input from all IFC and involve all relevant tool vendors.
- Create specific ITEA projects addressing the needs of the European tool vendors (e.g. standardization of software tool interfaces)
- Refine criteria for better result exploitation
- Coordinate activities among projects (e.g. TWINS, SPICES and GENE-AUTO)



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Thank you for your attention

