



X vs. Web Decision

Mike Daily

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Some History...



- Original Client development/prototyping used X/Motif (ESST) with some Web
- In September '95, we started serious prototyping with Java alpha code
- JEST first shown at PW2, one year ago
- By CDR (April 96) we opened second development track of a Java-based 'basic Web client' for guest access
- Since then, Java has exploded in popularity, with strong backing by IBM, Netscape, Oracle, many others (even Microsoft)
- Maturation of tools, security, and performance very rapid (5x of X/Motif)
- ECS schedule slips and resulting replans motivate a close look at strategy



X/Motif pros/cons

Pros: mature technology

- COTS and OTS tools
- known (relatively high) performance
- available staffing pool

Cons: cross-platform

- no native PC/Mac support; mediocre emulators
- problems with different UNIXes
- EP experience has found very large overhead in updating, distributing, and maintaining versions



Web/Java: Pros/Cons

Pros: powerful new approach

- Virtual machine supports UNIX, PC, Mac
- Capitalizes on popular Internet/Web technology wave
- Java is a fundamentally sound technology
- Much simpler maintenance cycle

Cons: requires shifting gears

- Still-evolving tools, security, performance situation
- Skill/experience shortages
- Not yet standardized/ successful; competitive pressures



Decision

Risk management prototypes and studies

- **Market studies to understand available/emerging tools: conclusions are that widget-level (C)OTS becoming available in time, but specialty items like GIS (for spatial) not yet available**
- **Prototyping demonstrates feasibility of building spatial, temporal, and key middleware functionality. Performance and security solutions feasible.**

Consultation with stakeholders

- **Active topic in meetings/telecons with DAAC Managers, Tirekickers, ESDIS, and other community stakeholders**
- **In early December ECS recommended and ESDIS concurred on:**

Decision to focus on Web/Java

- **Coverage is main search, browse, order, access to ECS services**
- **ASTER DAR/DPR and EOSview will remain X/Motif**



Implications

Web/Java has very different marketplace maturity

- GUIbuilders and other productivity tools are just emerging
- Key components like spatial must be built

We have anticipated this proactively

- Continuous scanning of Internet sources; extensive testing
- Accelerated spatial & temporal applet development

Many functional components will have two phases:

- Schedule-driven version with requirements met
- Late-stage upgrade to improve look-n-feel, flow, etc.
- Upgrades will be prioritized by needs for just-in-time release