

Intro to Panel at WWW-2003: Semantic Web Services: Obstacles and Attractions

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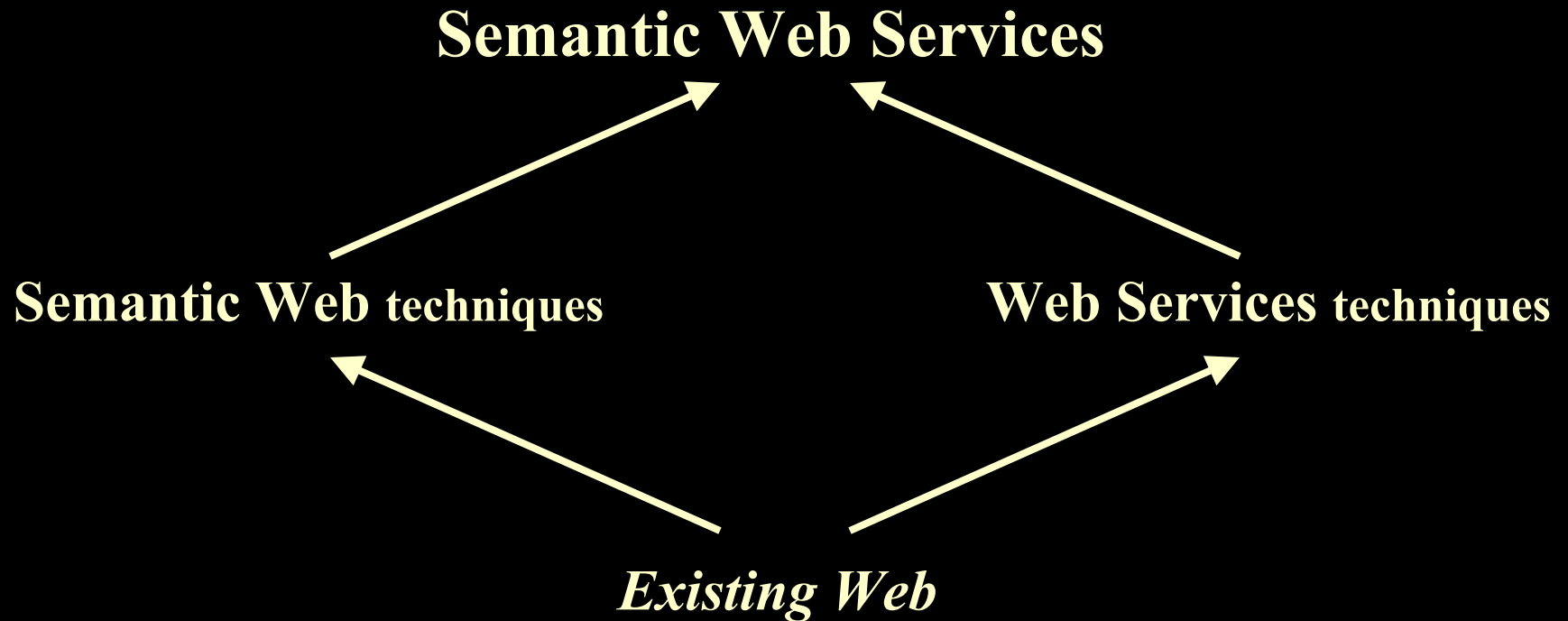
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Next Generation Web



Semantic Web Services

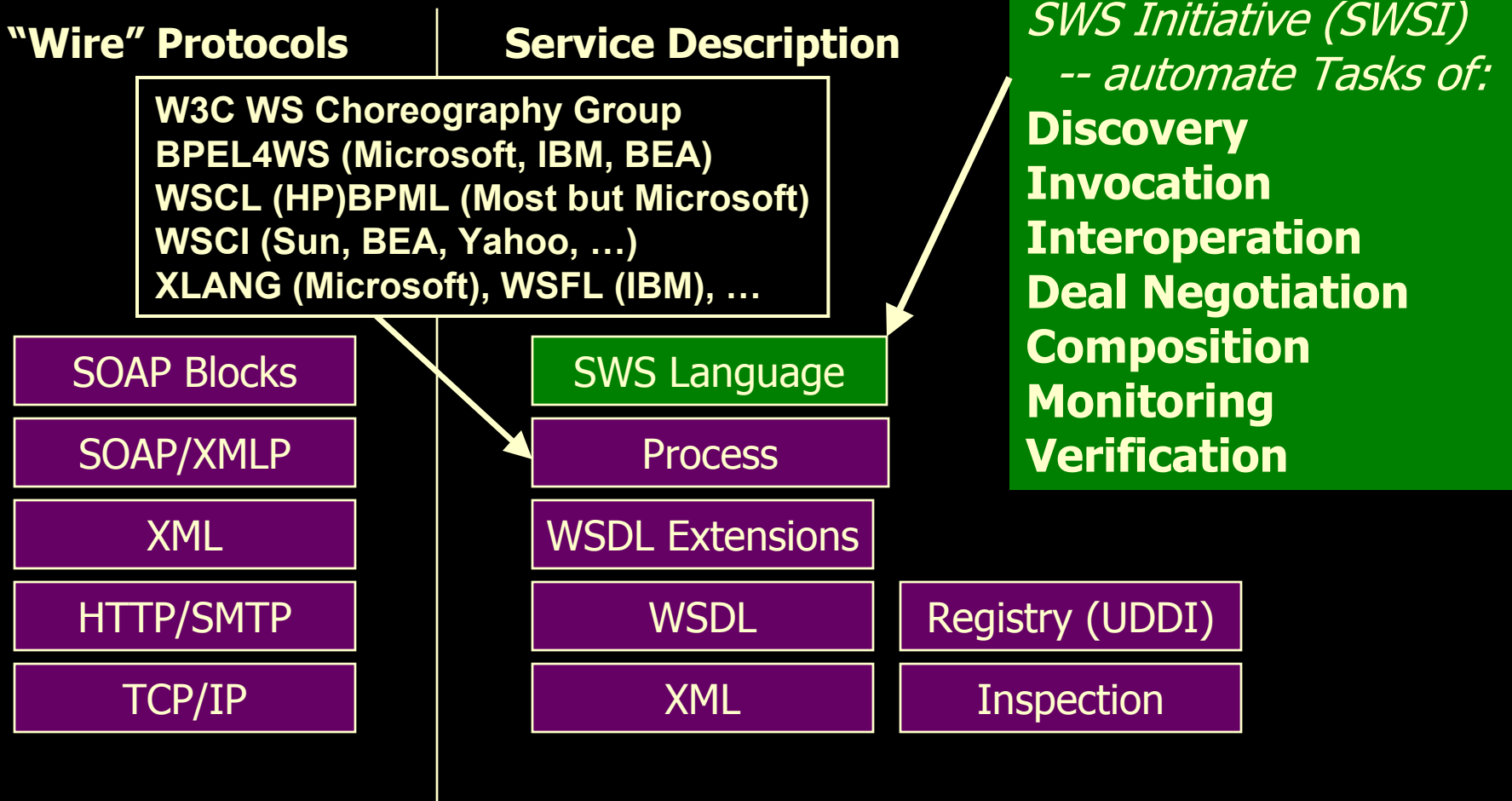
- Convergence of Semantic Web and Web Services
- Consensus definition and conceptualization still forming
- Semantic (Web Services):
 - Knowledge-based service descriptions, deals
 - Discovery/search, invocation, negotiation, selection, composition, execution, monitoring, verification
 - Integrated knowledge
- (Semantic Web) Services: e.g., infrastructural
 - Knowledge/info/DB integration
 - Inferencing and translation

Analysis:

High-Level Requirements for SWS

- Support Biz-Process Communication
 - E.g., B2B SCM, CRM, EAI
 - E.g., e-contracts, financial info, trust management.
- Support SWS Tasks above current WS layers:
 - Discovery/search, invocation, deal negotiation, selection, composition, execution, monitoring, verification

SWSI Language effort, on top of Current WS Standards Stack



[Slide authors: Benjamin Grosf (MIT Sloan), Sheila McIlraith (Stanford), David Martin (SRI International), James Snell (IBM)]

Some New Research Application Scenarios for Rule-based Semantic Web Services

- SweetDeal [Grosf & Poon WWW-2003] configurable reusable e-contracts:
 - Represents modular modification of proposals, service provisions
 - LP rules as KR. E.g., prices, late delivery exception handling.
 - On top of DL ontologies about business processes from MIT Process Handbook
 - Evolved from EECOMS pilot on agent-based manufacturing SCM
(\$51M NIST ATP 1996-2000 IBM, Boeing, TRW, Vitria, others)
- Financial knowledge integration (ECOIN) [Firat, Madnick, & Grosf 2002]
 - Maps between contexts using LP rules, equational ontologies, SQL DB's.
- Business Policies:
 - Trust management (Delegation Logic) [Li, Grosf, & Feigenbaum 2003]:
Extend LP KR to multi-agent delegation. Ex.: security authorization.

SWS Adoption Roadmap: Some Strategy Considerations

- **“Death. Taxes. Integration.”**
- Expect see beginning in a lot of B2B interoperability or heterogeneous-info-integration intensive (e.g., finance, travel)
 - Actually, probably 1st intra-enterprise, e.g., EAI
- Reduce costs of communication in procurement, operations, customer service, supply chain ordering and logistics
- Agility/speed/flexibility in business processes, supply chains

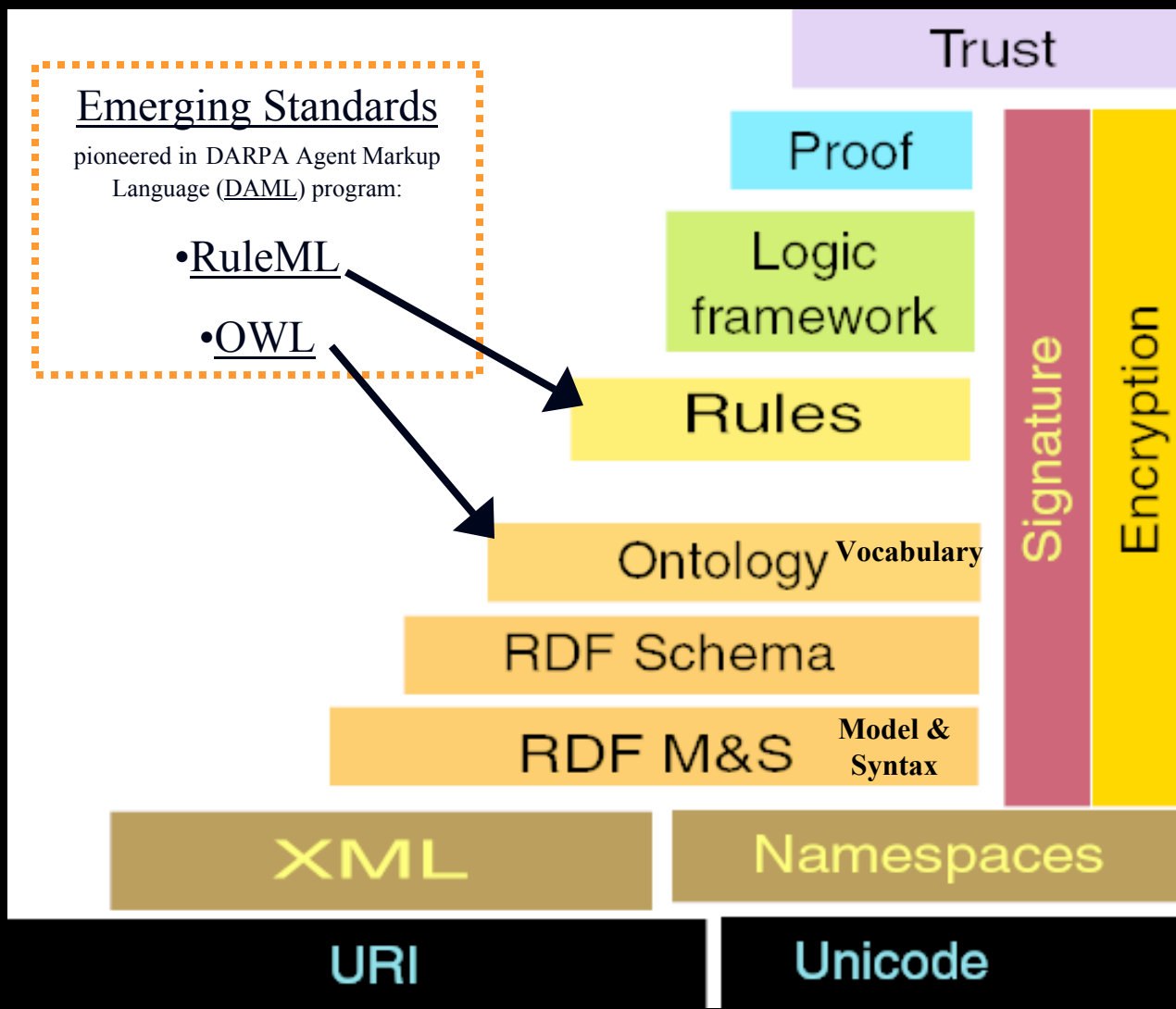
Panel Schedule & Protocols:

goal: keep it moving

- Intro by Panel Chair
 - Also: read the handouts on:
 - 1. panel topic & background; 2. panelist bios
- Panelist presentations on Obstacles and Attractions
- Q+A:
 - Direct Question to ****1**** Panelist
 - You can also hand in a written question to panel chair – include your name (i.e. non-anonymous)
 - Keep brief the statement of Question – 30sec max
 - Keep brief the Answer – 60sec max
 - NO audience Comments (opportunity for that will be later!)
- Panelists interchange: Q+A **among panelists** (1-2 Q's per)
- Comments & Q+A

OPTIONAL SLIDES FOLLOW

W3C Semantic Web “Stack”: Standardization Steps



[Diagram <http://www.w3.org/DesignIssues/diagrams/sw-stack-2002.png> is courtesy Tim Berners-Lee]