

DEFENDING THE SPIRIT OF THE WEB

CONFLICTS IN THE INTERNET STANDARDS PROCESS

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The research question: Why do standards participants act the way they do?

The larger question: Why do we sometimes get great standards, and other times unimplementable messes?

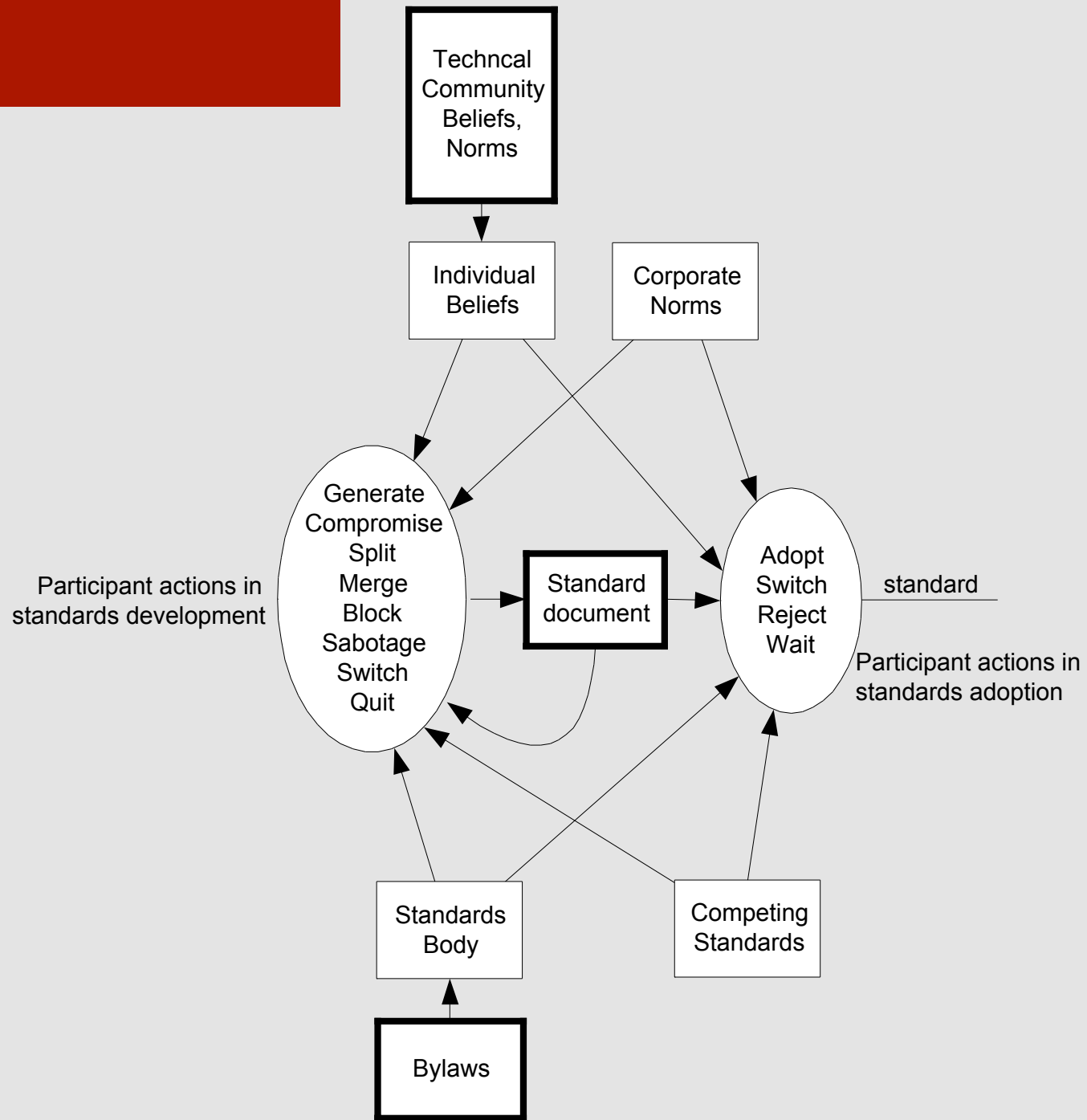
- Past case: web services choreography standards.
- We analyzed REST vs SOAP
- REST = Representational State Transfer – the way the web works, according to its adherents
- Also related: early RFCs, OMG workflow, DAML

- “The use of a SOAP body to carry the request for the state, with an element of the body representing the object in question, is seen as **counter to the spirit of the Web** because the resource is not identified by the Request-URI of the HTTP GET.” (Mitra 2003)
- “SOAP-based services are called ‘Web Services’ because their proponents wish to partake of the Web's success -- yet they don't build on its core technologies, URIs and HTTP...**What we need to do is gather together a fellowship of like-minded Hobbits, Dwarves, Elves and men** and go on a quest to educate the world about the limitations of SOAP-RPC interfaces.” (Prescod 2003).

- Several observations/conclusions
 - Vendors and users may have strong affiliation with a research culture— the ideas of this culture drive the decisions of some standards participants
 - There may be an aesthetic heuristic toward simplicity
 - Participants on standards hop venues when their heuristic indicates potential failure
 - The bylaws of the standards groups change who hops where.

- Case-based, with one primary case and some secondary cases
- Multi-perspective
 - Following ideas through postings, interviews
 - Following the network of people
 - Analyzing the economics (decision-making)
- Conclusions are in contrast to the view that standard makers represent the interests of their sponsors.

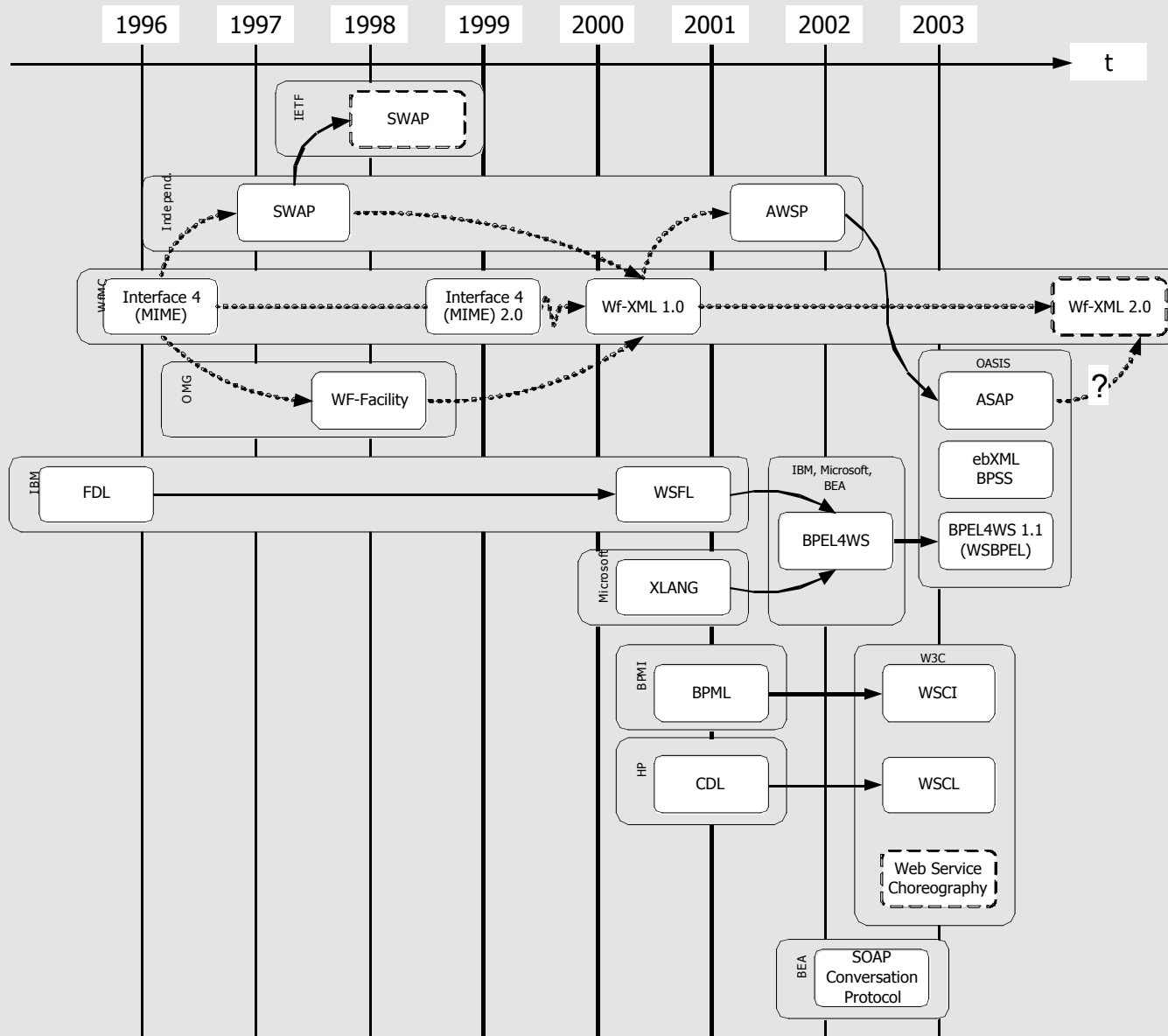
A Model



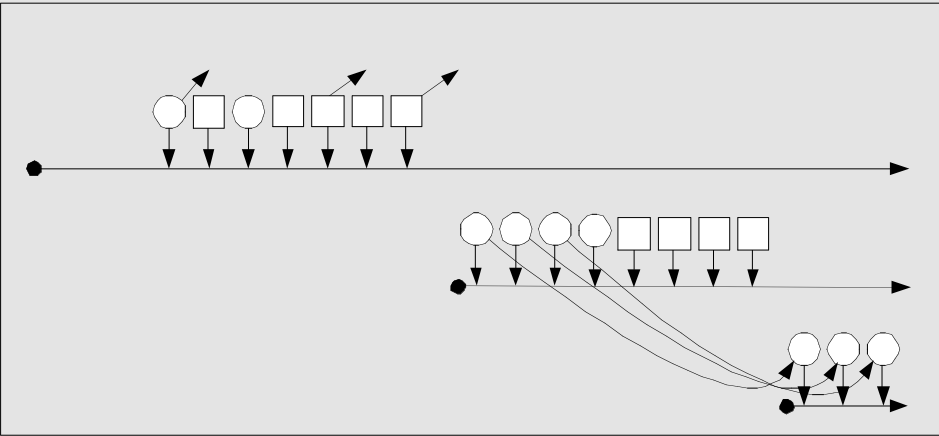
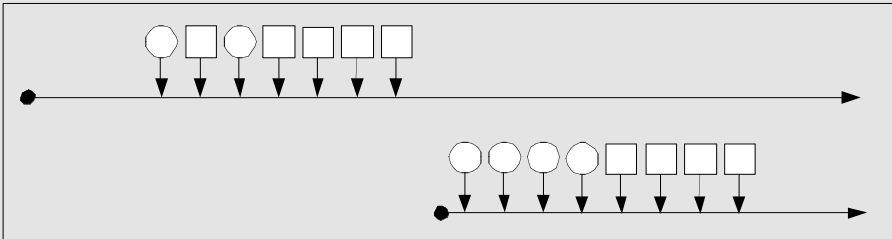
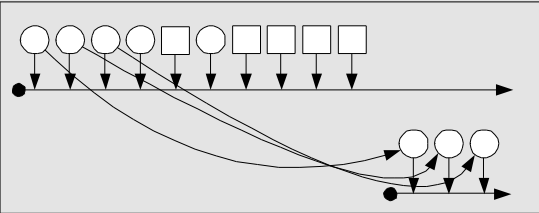
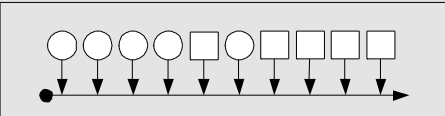
- Should the conclusions be about method or standards?
- How can we improve the method?
 - Discussing alternate explanations
 - Integrating perspectives?
- Do we need more cases? Candidates are:
 - OMG workflow – vendor vs. academics
 - Pi-calculus (vendor using theory as weapon)
 - DAML
- Should we develop the aesthetic argument?
 - Page length == complexity?
- Under what conditions is what we are saying true?
 - Maybe not for RosettaNet, ISO 15022
 - Infrastructure standards that research-types take interest in

Appendix: Diagrams from the paper

Standards groups



Individuals



Length of Standards

Group	Standard	Year	Version	Pages
W3C	WSCL	2002	1.0	22
DAMLSC	DAML-S	2002	0.9	26
W3C	WSDL	2002	1.2	30
NIST	PSL	1998	0.98	32
OASIS	ASAP	2003	0.1	34
WfMC	Wf-XML	2002	1.1	57
W3C	XML	2000	1.0	59
IETF	HTTP	1996	1.0	60
IETF	FTP	1980	1.0	70
IETF	HTML	1995	2.0	70
WfMC	XPDL	2003	1.0	87
OMG	Wf-Facility	1997	1.0	95
BPMI	BPML	2002	1.0	103
IBM	WSFL	2001	1.0	108
W3C	SOAP	2003	1.2	128
OASIS	BPEL	2003	1.1	136
OASIS	BPSS	2001	1.01	136
RosettaNet	RN Implementation Framework	2002	2.00.01	143
ISO	SGML	1986	1.0	155
IETF	HTTP	1999	1.1	176
OASIS	BTP	2002	1.0	188
OMG	UML	2003	1.5	736

One side	The other side	Notes
SOAP (Web Services)	REST	(Fielding 2000)
Functional	Object Oriented	(Swenson (in press))
Hard and Crunchy	Soft and Stringy	(Barr 2003)
Corporation	Developer	(Dumbill 2002)
[Forces of Darkness]	Hobbits, Elves, Dwarfs, Men	(Prescod 2003)
Complete	Simple	(Gabriel 1989)
Closed source	Open source	(Raymond 1999)
Hierarchy	Market	(Raymond 1999)
Strongly typed	Weakly typed	(Barr 2003)

Vendors

	ASAP	BPML	BPEL	BPSS	RosettaNet	SOAP	SWAP	Wf-XML	WSCI	WSCL	WSDL
	OASIS	BPMI	OASIS	ebXML	RosettaNet	W3C	IETF	WfMC	W3C	W3C	W3C
BEA			●						●		
CSC		●						●			
Chevron				●							
Cisco					●						
CommerceOne				●							
DHL					●						
E2Open				●	●						
FedEx					●						
Fujitsu	●				●			●			
HP					●					●	
IBM			●		●	●		●			●
Intalio		●							●		
Intel					●						
iWay	●										
Izar, Inc.	●										
Lucent				●							
Microsoft			●		●	●					●
Netscape							●				
Netfish				●	●						
Oracle					●		●				
SAP		●	●		●			●	●		
SeeBeyond		●									
Siebel			●								
Staffware								●			
SUN		●		●	●				●		
Telcordia				●							
UPS					●						
Versata		●									