Myths around Web Services
or the dark side of Web services

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Web services seen as …

Extensions to EAI solutions and conventional middleware to facilitate system integration

A vehicle for electronic commerce and wide area information systems
The sciences of the artificial …

The greatest thing about software is that it is not subject to natural laws and we are all too willing to ignore common sense.
A ridiculous proposal …

I use a bicycle to go to work, 
therefore
I can use a bicycle for interplanetary transportation

We can do SOAP and WSDL, 
therefore
we can now completely automate electronic commerce 
and wide area distributed systems
False premises, false conclusions

To use a bicycle for interplanetary transportation we need to add more gears and increase the capacity of the attached water bottle.

To repeat the success of conventional middleware at the WAN level we need to adopt WS-Coordination, WS-Transactions and BPEL4WS …

… and this is what all customers want.
Today, the dark side of Web services is anything beyond SOAP and WSDL …

… but it is not even clear what is the best way to use SOAP and WSDL
SOAP will be used as a low level communication primitive to implement peer-to-peer wide area messaging systems (in the sense of not having a centralized controller as it happens in conventional message oriented middleware)
WSDL will be used to describe the interface to the service queue without specifying the content of the messages in the queue.

Put message → WSDL description

OK ← incoming queue
On XML …

With SOAP used for implementing queues and WSDL describing the access point (but not the service), XML will become the syntax of the plumbing, not the syntax of the applications.

SOAP message

- SOAP header
  - protocol data
- SOAP body
  - MIME attachment description
- attachments, binary data, nested documents
Even complex, multi-party business protocols and conversations will be supported only at the level of pair-wise interactions.
Myths are research opportunities

- The current confusion is a challenge but a great opportunity:
  - Web service messaging systems (on top of SOAP but providing all the features needed in a real messaging system)
  - Wide area message oriented middleware (a queuing system with a Web service interface using SOAP for interactions between queues)
  - Description and reasoning about composite Web services (the actual conversations resulting from electronic commerce exchanges)
  - All flavors of wide area distributed systems using your own home-grown variety of WS-specs (like companies are doing): Web service JDBC, federation and replication on a Web service interface, Web service query interfaces, …