Tjenestearkitektur for morgendagens hjemmenettverk.

Knut Holmqvist
Assisterende Forskningssjef
Norsk Regnesentral
Agenda

- Architectures
- Semantic Web Services
- Home Area Network
- Service Level Agreements
Three levels of Systems Development

► Architecture
  ▪ Technology
  ▪ Materials
  ▪ Tools
  ▪ Esthetic

► Design
  ▪ A Drawing, a Model, ...
  ▪ Limited by technology, materials, tools, ...

► Implementation
  ▪ The Finished Building
Services and SOA

► SOA is an Architecture for Computer Systems
  ▪ As Client Server

► Services
  ▪ Application

► But, then again ...
Services are not Components

- Services solve integration problems
- Components solve programming problems

Services
- are not object oriented
- have document interface
- are autonomous
- have behavioral contract with agents
- are loosely coupled
The Semantic Web

Intelligent software agents roam the internet to do sophisticated things for people.

Very close to a T. B-L quote
Semantic Web Services
Yield Management Example

What price will an airline charge for a flight ticket?

... and a hotel for a room?

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*) Prisene kan variere gjennom perioden.
Three Models of Discovery
Open Source Infrastructure for Runtime Integration of Services

(OSIRIS)
Home Area Network

USB

SCART
Telvent Service Bus

Services Bus

Node 1
Node 2
Node 3
End-to-End Measurement

Content Production
- Technical quality of original media feed
- Original quality
- Define reference for max. available QoS

Streaming server
- Streaming server
- Encoding params
- Media format
- Server dependent
- Encoding dependent
- Measure encoding QoS
- Mapping to potentially perceived QoS without network

Network
- Technical QoS
- Measure technical QoS
- Mapping to potentially perceived QoS without network

Decoding
User equipment
- Perceived QoS
- Network
- Encoding
- Measure technical QoS
- Mapping to Perceived QoS

Define reference for max. available QoS
WSLA-Extension in OSIRIS

Evaluation / Acting

- Measurement service

Reporting

- Service
- WSLA Extension
- Remote Services Communication

Deployment

Negotiation

- Remote Services Communication
- WSLA Extension

OSIRIS Service Node

OSIRIS Agent Node
Summary

- Architectures
- Semantic Web Services
- Home Area Network
- Service Level agreements
Thank you