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ANSA Phase III

Information Services Framework - Overview (Slides)

Nigel Edwards

Abstract

Information services are being deployed in the global network now. Currently there is a dearth of technology for managing these services. The technical challenges which need to be solved by management technology include: end to end resource control, dependability, information brokering and federation.

This presentation gives an overview of the ANSA work on an Information Services Framework. The objective is to develop the concepts and infrastructure needed to manage information services in the global network

Current work focuses on two areas: sorting out the basic concepts needed; experimenting with infrastructure components to determine what is possible. These are covered in more detail in APM.1367 and APM.1370 respectively.

APM.1368.00.04

Draft

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Information Services Framework — Overview

Nigel Edwards

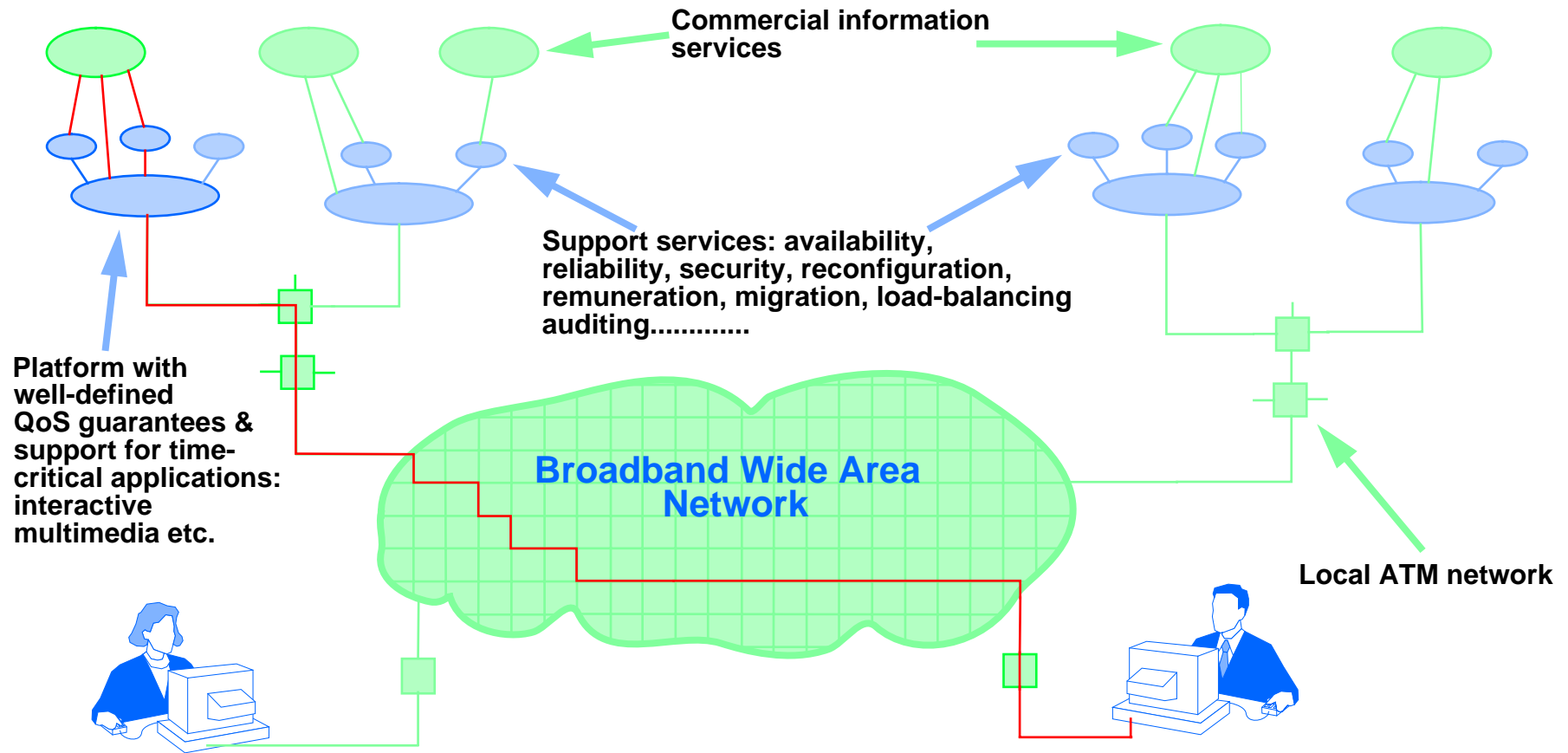


Information Services Framework — Overview

Objective: “Develop the concepts and infrastructure needed to manage information services in the global network”

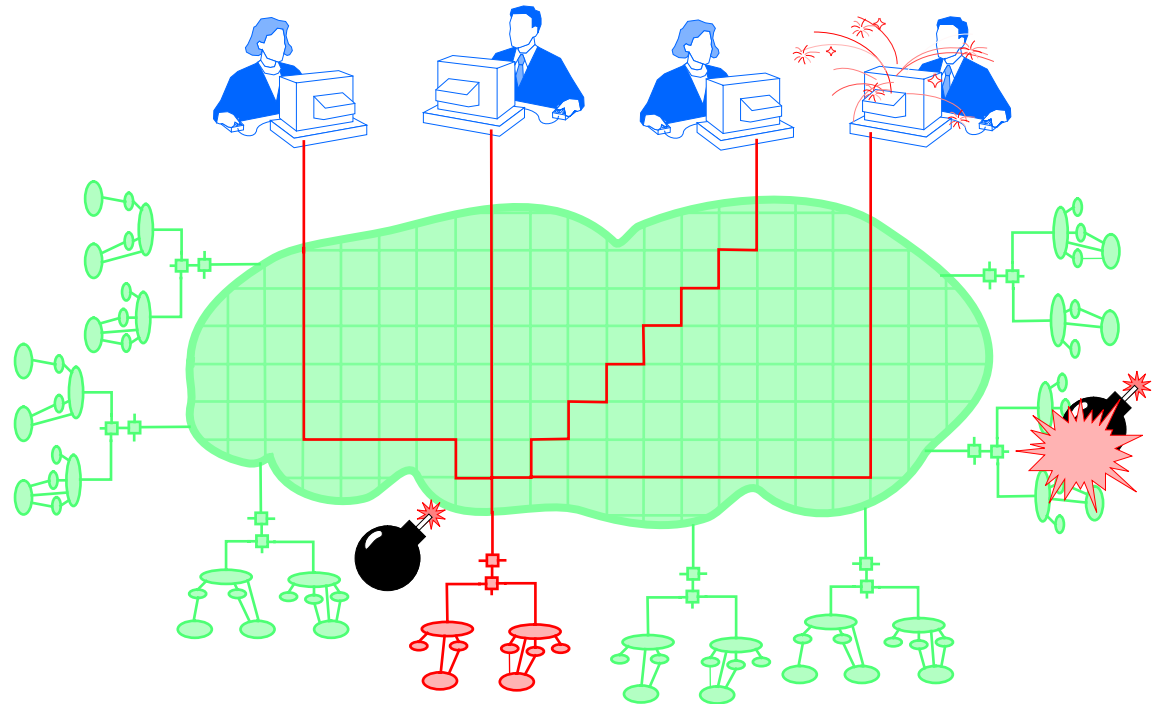
- Review of technical challenges
- The work packages (see APM.1306)
 - Basic infrastructure
 - Management Engine
 - Agents
- Summary

Business using a broadband network



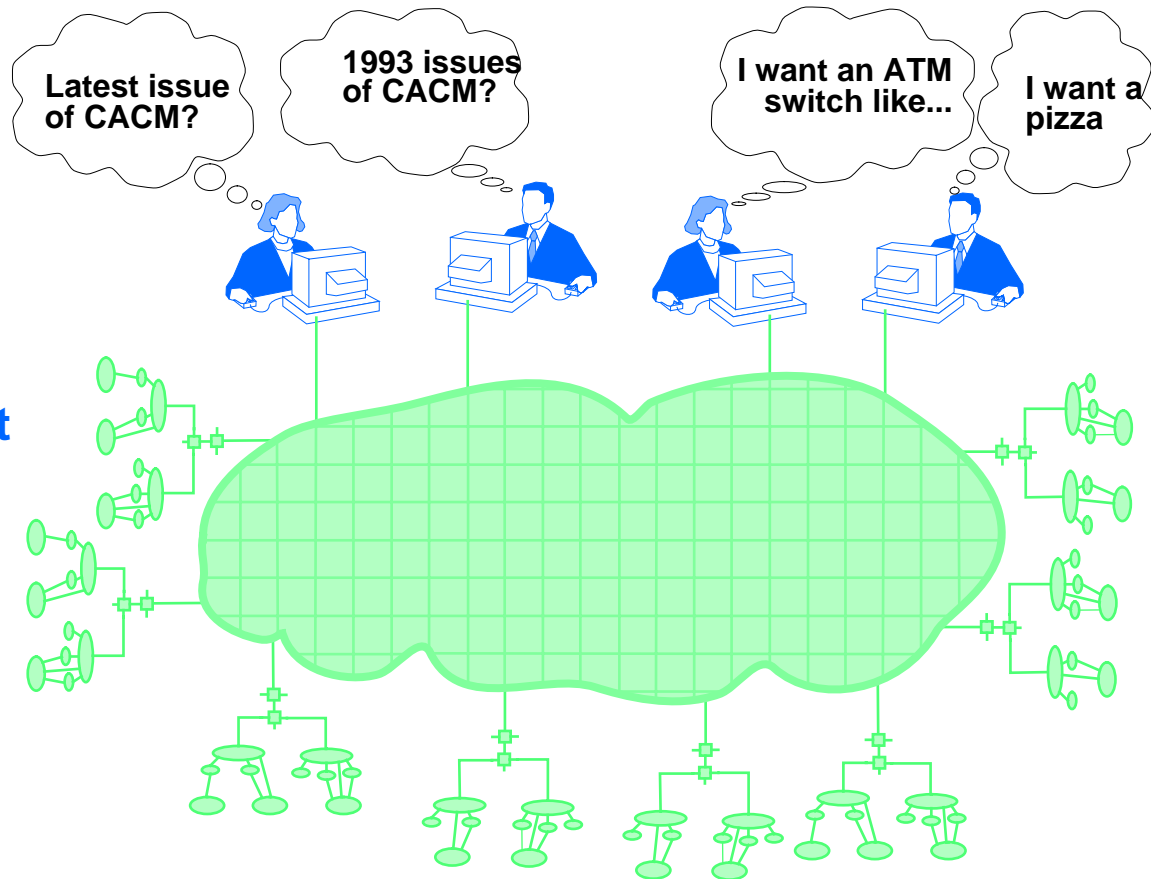
Technical Challenges

- Resource control
- Dependability
- Interactive Multi-media
- Ubiquitous connectivity
- Security
- Remuneration



Technical Challenges (continued)

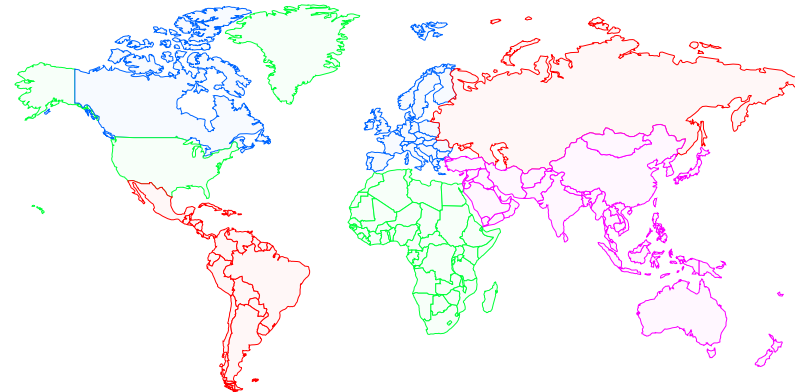
- Trading & naming
- Agents & brokers
- Fast service development & deployment
- Multi-party, federated collaboration





The Need for a Global Management Engine

- *The technical challenges are a set of requirements*
 - Much has already been developed in work on Distributed Object
- *Apply and develop this technology to build the infrastructure for GME*

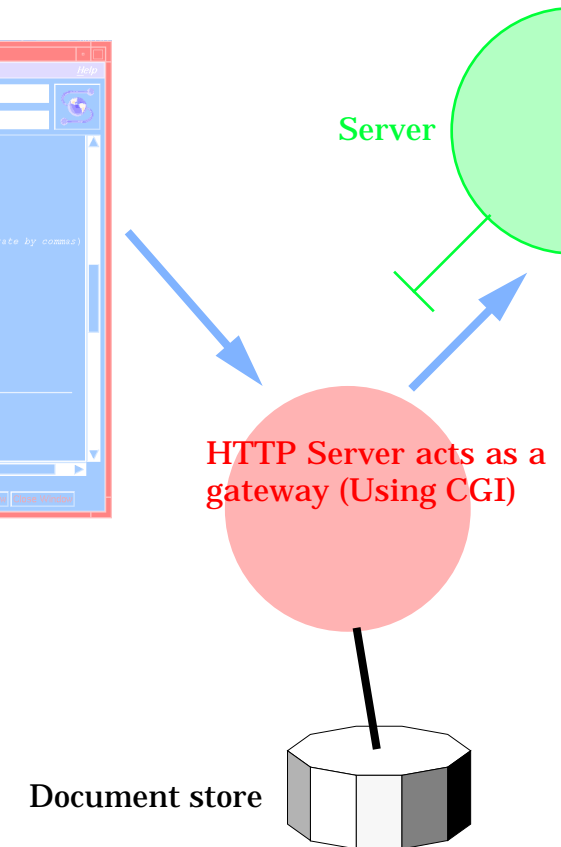
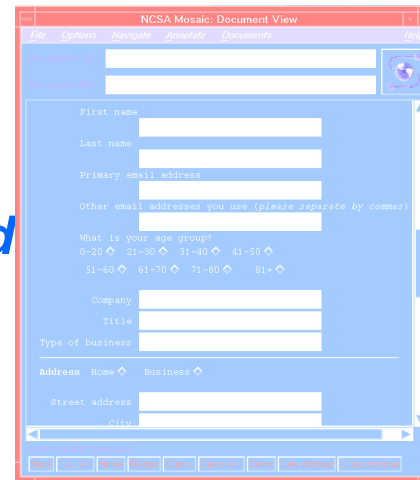


BUT.....

- *Where is the fastest growth in information services deployment at present?*

The fastest growth in I.S. deployment and use is in WWW

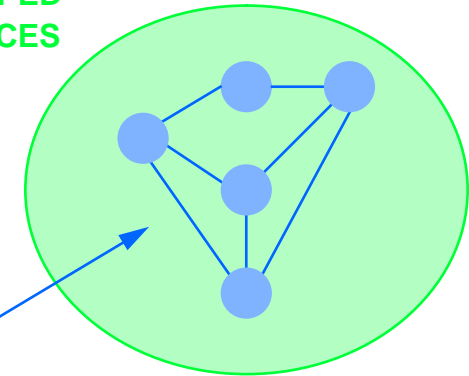
- *There is strong pressure to use this technology for commercial purposes.*
- *The technical challenges identified earlier need to be solved e.g:*
 - *URLs (<http://www.ansa.co.uk/>), URNs, URCs, URIs*
- *It is not just about retrieving documents*
- *Conclusion: an excellent opportunity to test and develop the components for the Global Management Engine.*



B1: Object Wrapped Information Services

- *A CORBA wrapper for (Internet) information service protocols e.g. HTTP, FTP*
- *Federating between Internet information services & CORBA*
- *Use of advanced naming concepts to enhance current technology & understand the basic concepts*
- *Develop an infrastructure to support the management engine*

CORBA
WRAPPED
SERVICES

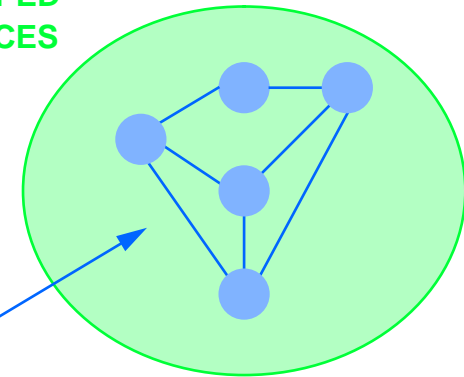


Non-CORBA
Protocols (e.g. HTTP, FTP)

B1: Infrastructure

- **Done:**
 - Trader accessible via WWW
- **In progress:**
 - Basic concepts
 - CORBA IDL to define WWW services
- **Future possibilities:**
 - Resource References
 - Relocation
 - Resource management & authoring tools
 - Trading on WWW resources
 - Integrating internet & CORBA technologies
- **See APM.1367 & APM.1370 for further details**

CORBA
WRAPPED
SERVICES

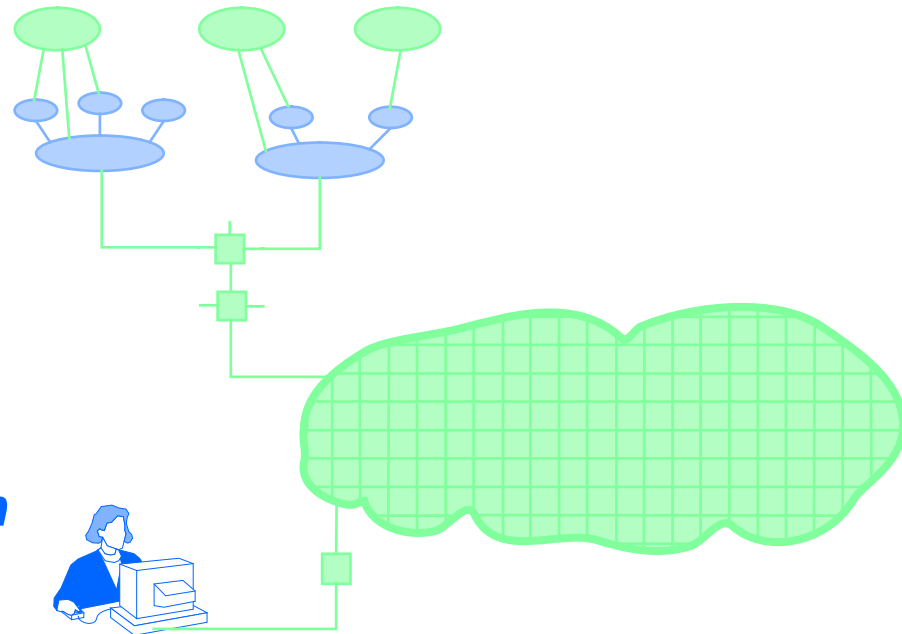


Non-CORBA
Protocols (e.g. HTTP, FTP)

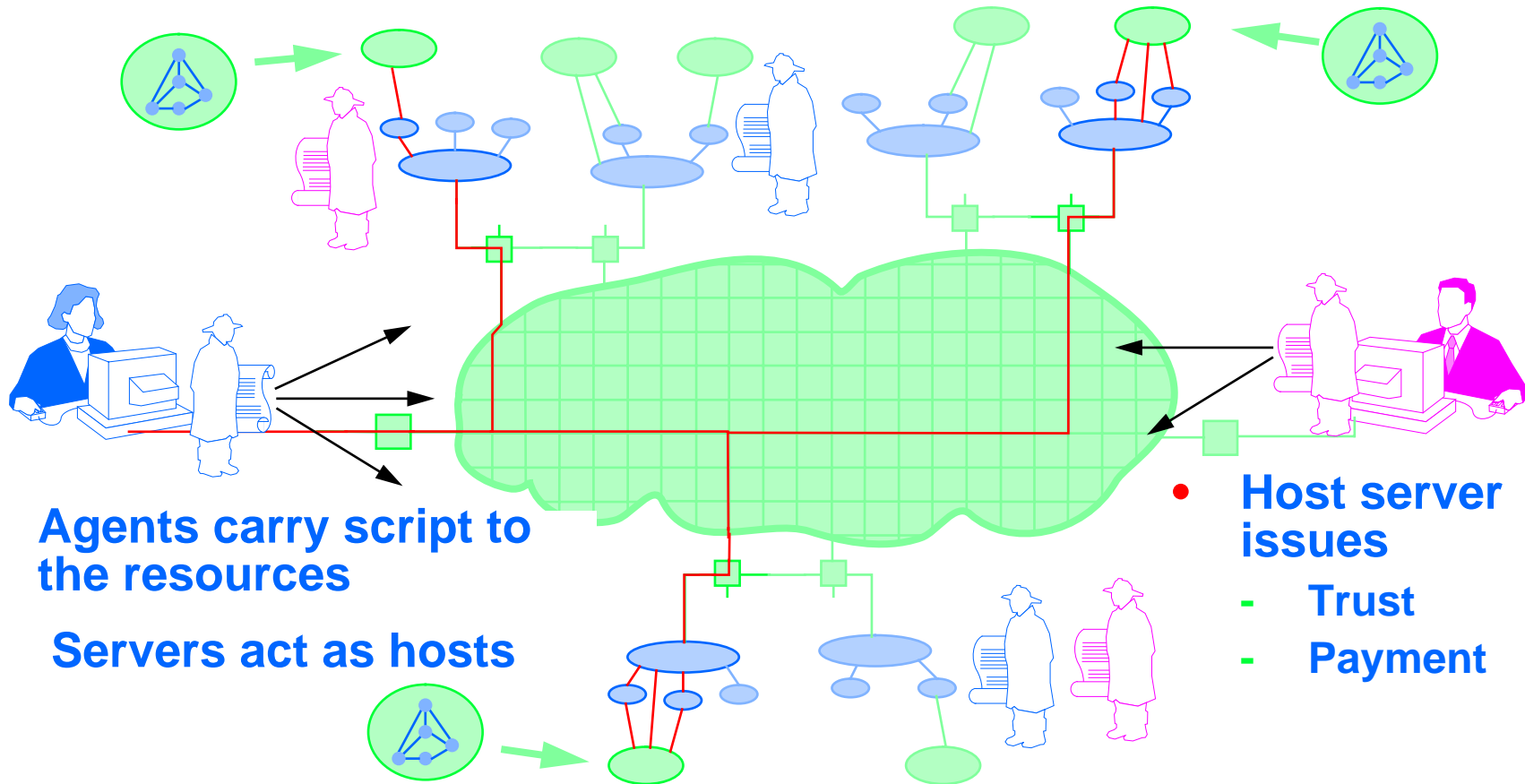
B2: The (Global) Management Engine

Basic Management services:

- *wide-area dependability*
- *trading and resource location services*
- *high level resource coordination e.g. cache management*
- *service provision or publishing tools*



B3: Scripts and Agents



- Agents carry script to the resources
- Servers act as hosts

- Host server issues
 - Trust
 - Payment



Summary

- **Objective: Develop the concepts and infrastructure needed to manage information services in the global network”**
- **Three work packages (see APM.1306):**
 - **B1: Object Wrapped Information Services**
 - **B2: The (Global) Management Engine**
 - **B3: Scripts and Agents**
- **Current Status:**
 - **Sorting out basic concepts and participating in relevant forums**
 - **Experimenting with infrastructure components to determine what is possible**