

EAI Use Case



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26/04/2007



- **Business current situation and role of EAI**
- **EAI Use case presentation: Digital Asset Management**
- **TripCom application to the use case**
- **Realization of the use case**

The Problem for Companies



Isolated data islands

- Use of proprietary technologies
- Custom applications vs. configurable applications
- Redundant information

Over rigid processes

- Communication protocols must be agreed
- Lack of scalability

Time to market difficulties

- Reusing processes is difficult
- Lack of process flexibility

High integration costs -> EAI

Data level EAI

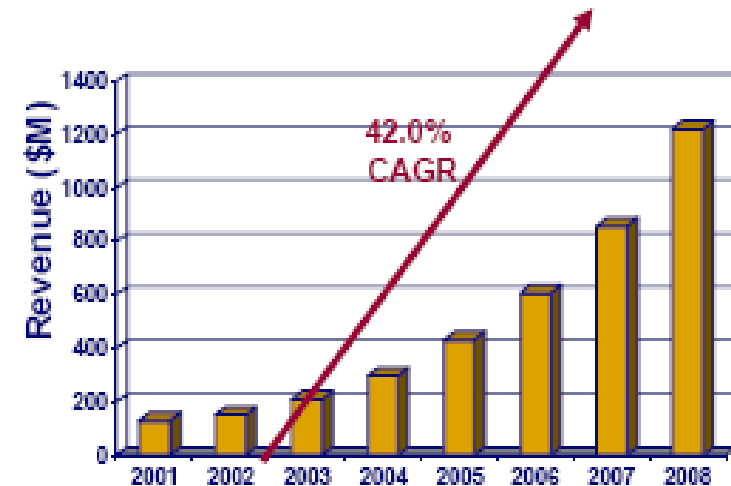
- Persistent storage
- Space decoupling
- Data Schema decoupling
 - Ontologies
- Easy data storage and retrieval (Linda)

Message level EAI

- Flexible coordination model
 - Based on Spaces
- Temporal decoupling
- Reference decoupling
 - Anonymous actors
- Web services support

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"DAM has the aim of organizing, protecting and distributing digital multimedia content in an efficient way" (Journal of DAM)



- DAM is an **emerging business** for telco companies (IDC)
- **Collaborative and dynamic scenario**:
 - Many actors involved
 - Ad-hoc business relationships
- **Heterogeneity**
 - New content, formats, technologies, business applications...
- Time to market is a strong requirement: **flexibility need**

EAI technologies used as solution

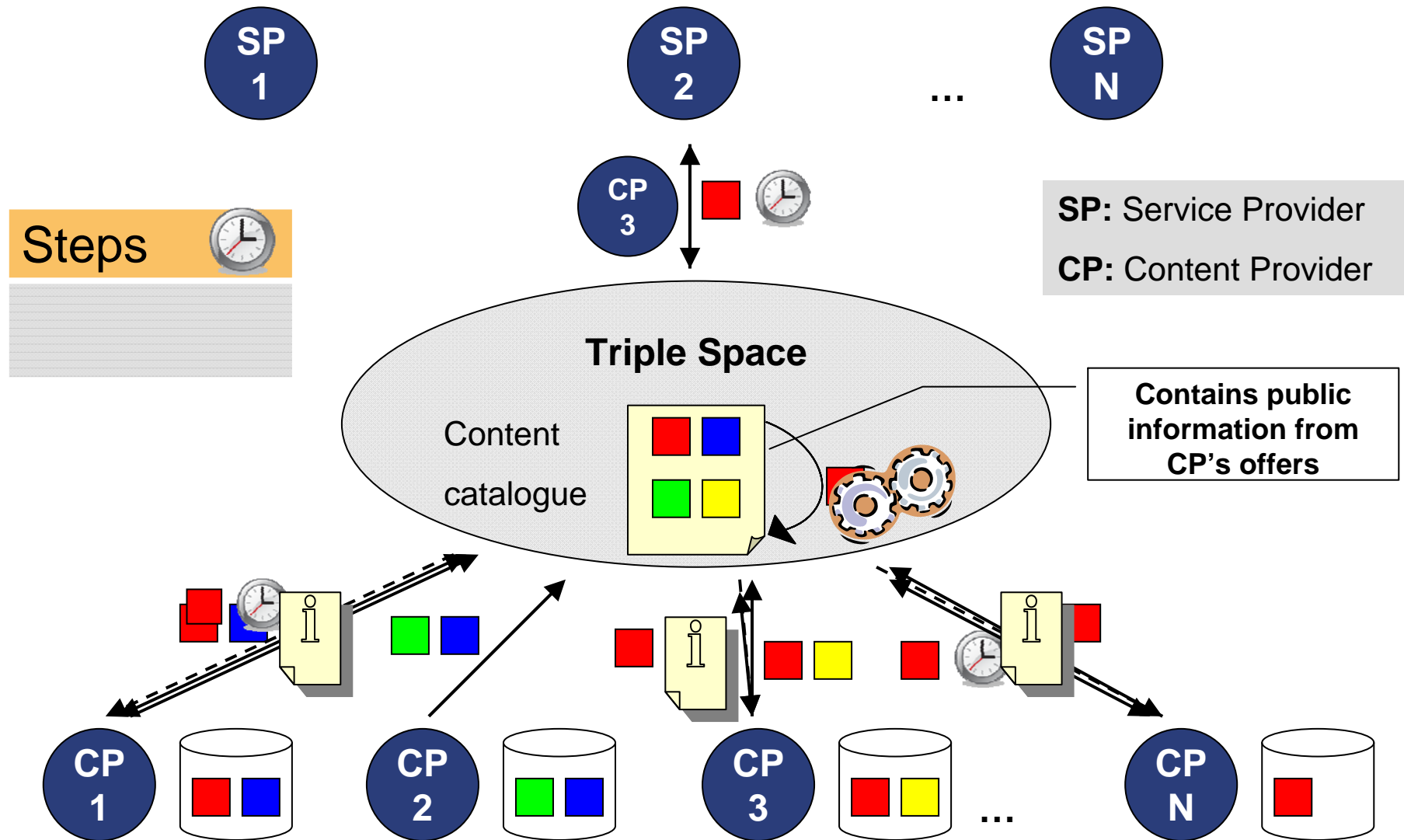
- Consists of offering opportunities to other actors to collaborate for a given period (auction)
- Service Providers gets the best offer until a new opportunity appears or this collaboration is broken
- Very dynamic with strong communication requirements
- Distribution requirements can take advantage of Triple Space

Strong coordination need

- Collaborative scenario between
 - Service Providers (SP) which want to offer more attractive services via a collaboration model
 - Content Providers (CP) which want to trade with their content in an open market model
 - We skip other roles at least for first stages
- Dynamic scenario where
 - Ad-hoc business relationships are often changed
 - Users will evaluate and influence the services
- Strong dependencies between actors
 - A service is a bundle of contents and added services

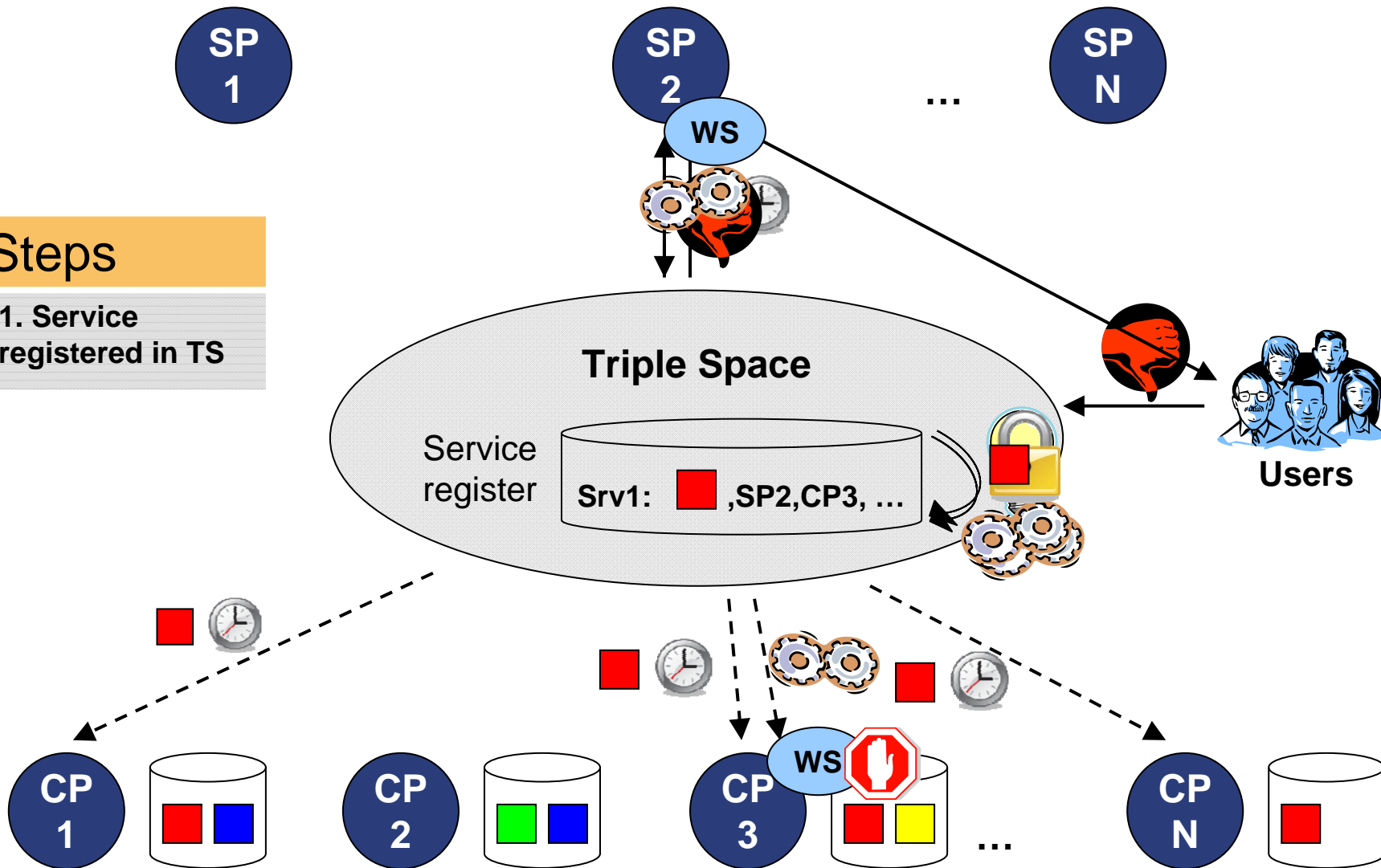
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Auction Marketplace Model



Multiple Dependencies Model

Steps
1. Service registered in TS

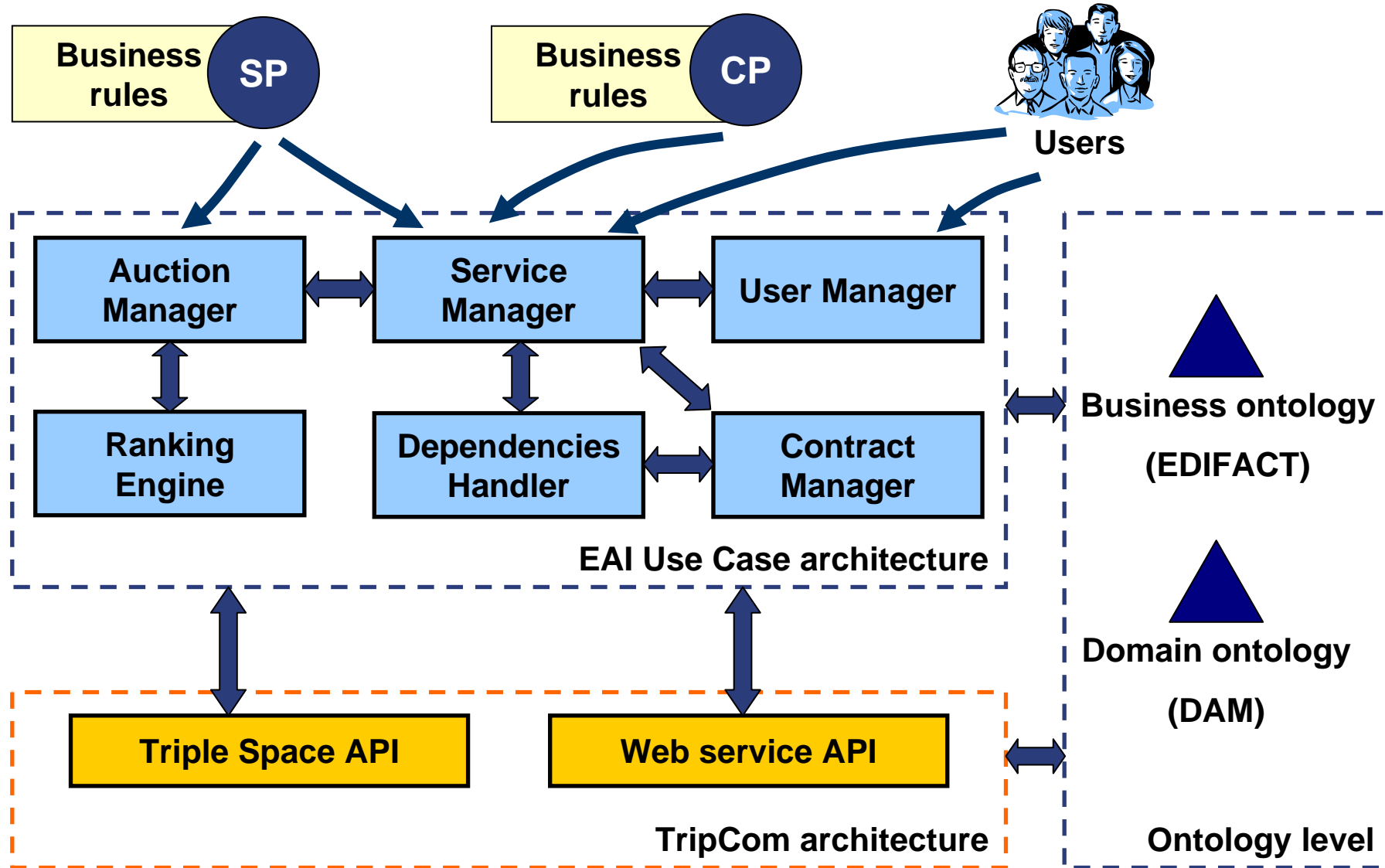


- **Persistent storage** during auction
 - CP can consult any previous information
- **Time-decoupling**
 - Asynchronous bids
- **Reference decoupling**
 - Actors don't usually know each other (anonymous)
- **Space decoupling**
 - Scalability, ad-hoc relationships
- **Data schema independency**
- **WS composition support: workflow needed**

Process automation in a reliable way

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Use Case Architecture Overview



- Two ontology levels to be built
 - Business ontology → EDIFACT (WP7)
 - Domain ontology → DAM ontology will be reused from SUPER project
- Implement aforementioned functionalities
 - Both Triple Space clients, WS and SWS for testing purposes
- Queries definition
- Actors implementation

Second year implementation

- **Business current situation and role of EAI**
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 - DAM business context and current solutions
 - WP8A use case description
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EAI to Solve these Problems



“EAI is the unrestricted sharing of data and business processes among any connected applications and data sources in the enterprise.” (Linthicum, 1999)

Traditional middleware	EAI
Application dependant	Application independent
Technology dependant	Business process oriented
Limited business processes visibility	Configurable across applications
Static implementation	Automated deployment

EAI levels	Data level EAI
	Message level EAI
	Business process EAI

- Implement a marketplace model within a DAM environment using Triple Spaces
- Solve all coordination and communication needs through the SOA paradigm and Space Based Computing
- Perform the semantic mediation needed by all actors collaborating from different schemas
- Automate the process keeping it the most transparent possible to SP
- Provide more flexibility to this scenario using TripCom decoupling levels

- Automatic offer handling
 - Automatically classify offers based on semantics
 - Security layer checks authentication of auctioneers
 - Offers are persistently stored in a data schema decoupling
- Time-decoupled message communication
 - Reference decoupling allows transparent communication
 - Interoperability from different CPs
 - Dynamic actor join/exit within the process

Improves scalability and business versatility