DAML
Agent Semantic Communications Service (ASCS)

Teknowledge

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Semantic Search Services

Basic Facts about the Engine
- Crawls and searches the DAML/OWL web
- Returns answer to query with exact data, not just the relevant pages
- Broadens query with simple inference
  - Equivalence, inverse, generalization/specialization
- Crosses ontologies where there are mappings
- Available 7x24 for over 2.5 years
- Indexes over 7,000,000 OWL triples
- Most responses in 1-10 sec
- Java and Web Service APIs for use as a service

New Features

- Users can publish new data into repository through URL registration
- Users can subscribe queries for semantic search
  - Answers to subscribed queries arrive in email
  - Answers generated in event-based manner or on user-defined schedule
- Full Web service and Java APIs for agents
  - Basic query
  - URL registration and query subscription
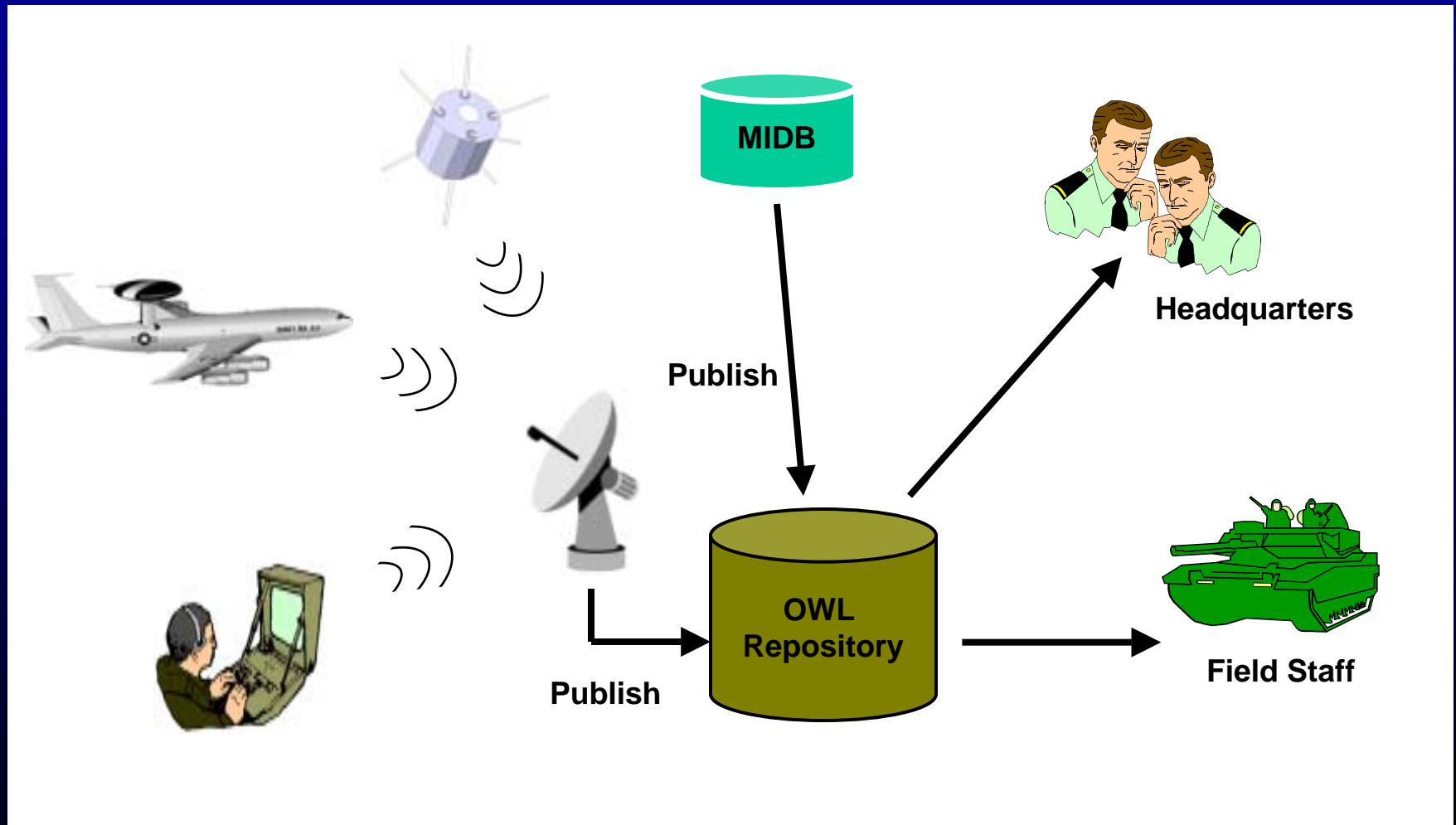 - Access to namespace vocabularies

Using the New Features

New features:
- Were developed mainly for the early adopters of semantic technologies in military and business organizations
- Help build an info-sphere for dynamic info exchange and sharing between producers and consumers
- Reduce maintenance work for hosts
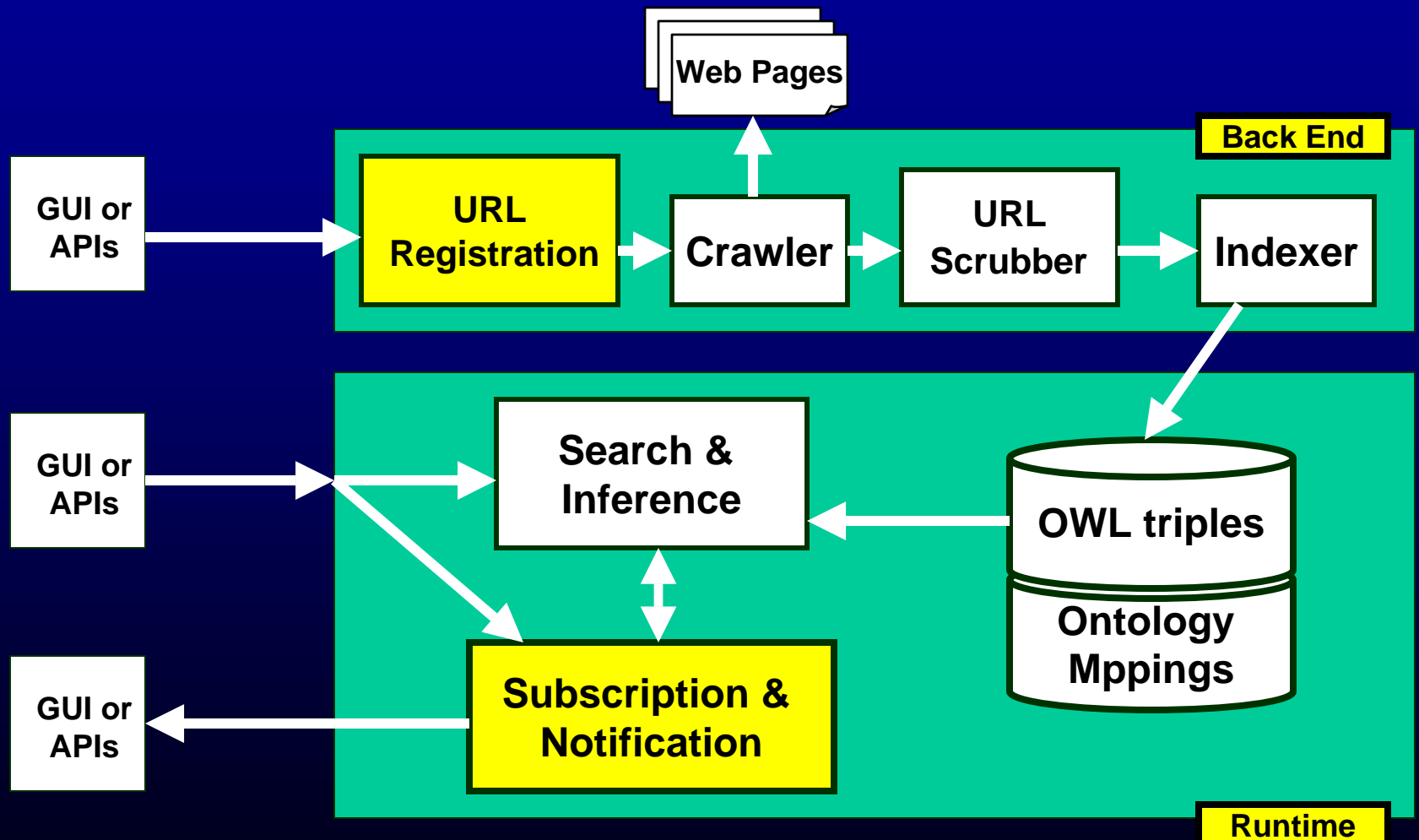- Increase situation awareness for the subscribed users

An Example

Status

Item	Status
Basic crawling & search	Done
URL registration & incremental indexing	In test
Three search GUIs	Done
Query subscription & notification	In test
Java & Web Service APIs	In test
Scalability and performance experiments	Preliminary data
Package and submit to SemWebCentral	Not started

Architecture

SemWebCentral

Open-source components

1. The back-end crawler & indexer
2. The basic and expert GUIs on top of the APIs
3. The ontology mapper utility

Government-Use licensing

1. The runtime search engine

Plan

- Quantify scalability and performance
- Extend the API test suites
- Package for adoption in enterprise intranets
  - Better documentation for software and APIs
  - Improved installation procedure
  - Existing GUIs as program samples
- Submit alpha version of components to SemWebCentral no later than August 1, 2004.