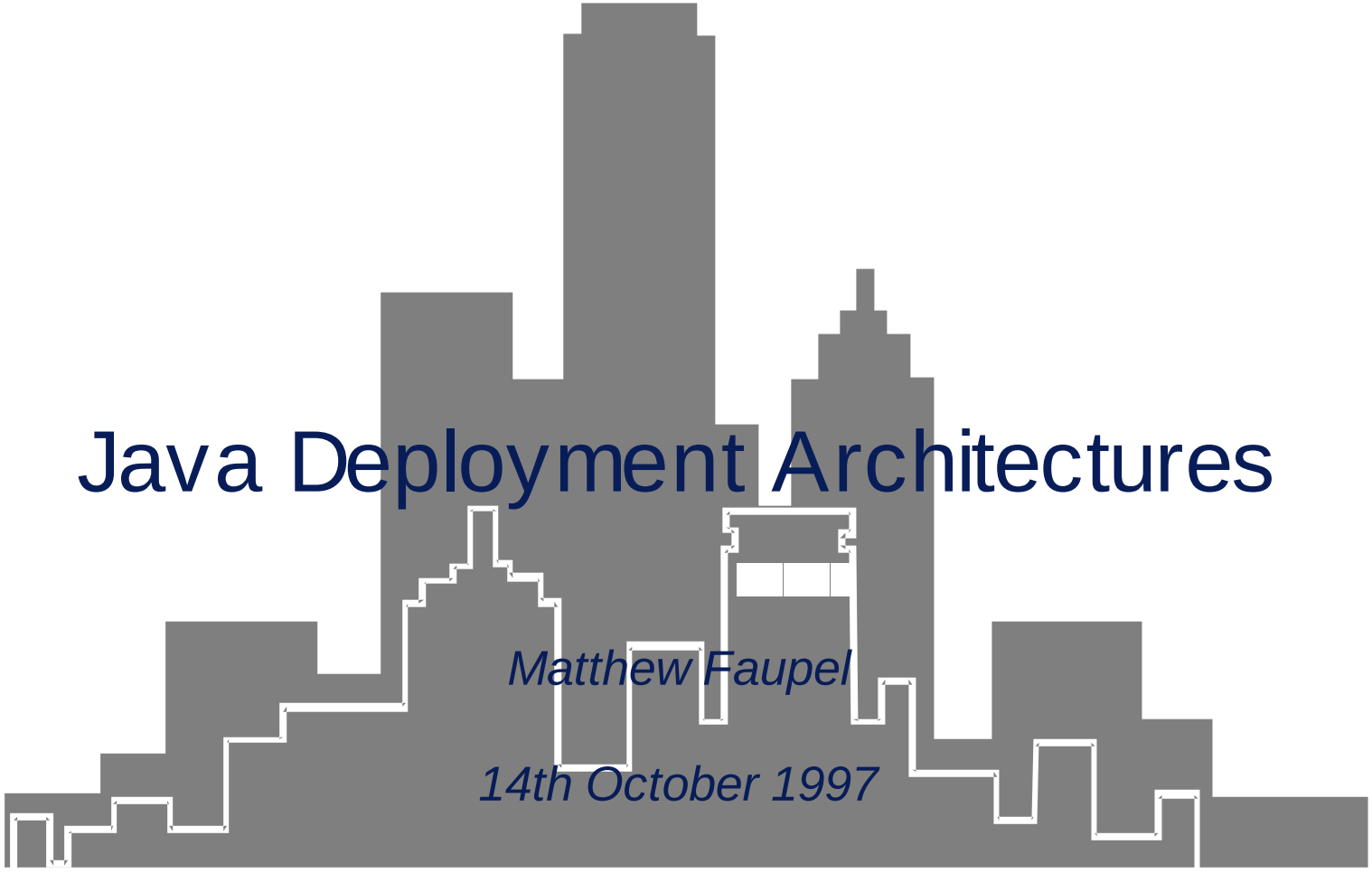

Java Deployment Architectures

Matthew Faupel

14th October 1997

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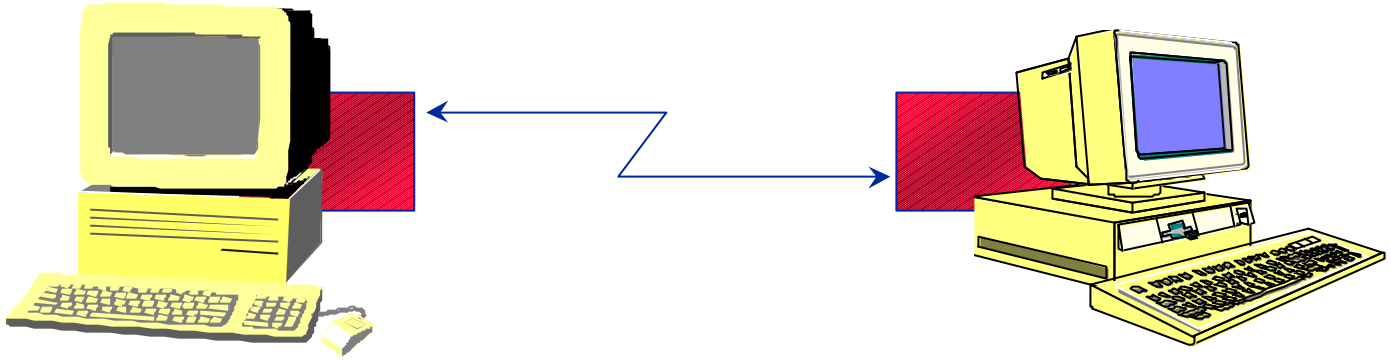
Distribution

- Application components in different locations



Why?

- Political: different entities interacting
- Resource-driven: must be physically close
- Efficiency: e.g. load balancing

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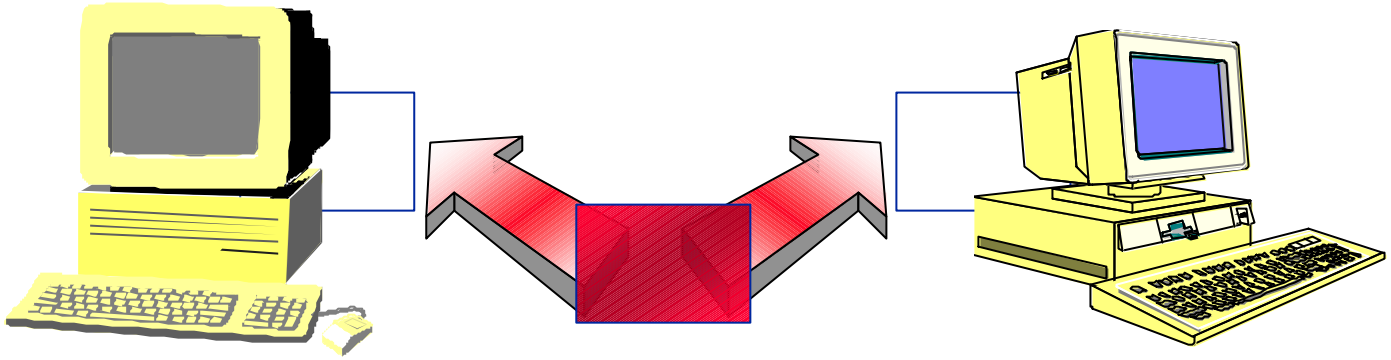
Deployment

- Automation of placement of components



Why?

- Delay location and binding decisions
- Ease application maintenance and update
- Avoid incompatibilities

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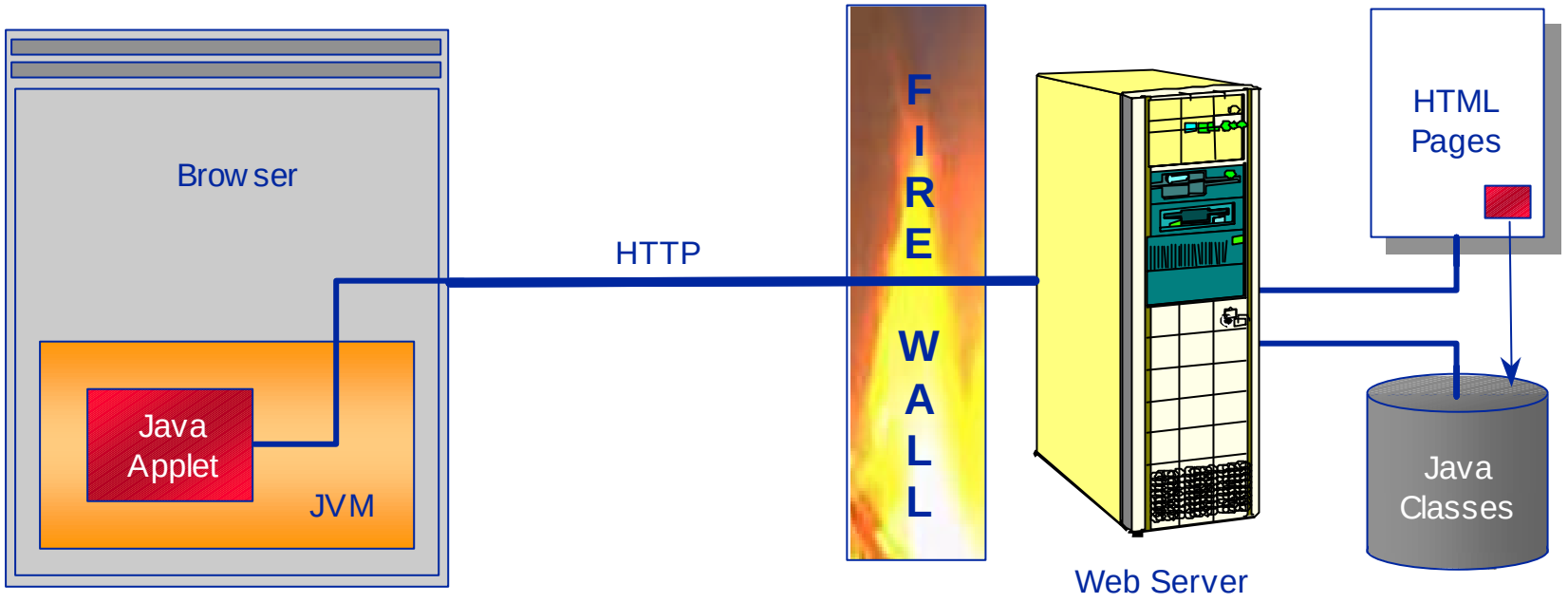
Java applets



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Java applets

- Widely supported
- RMI available for distributed computing

BUT

- They are ephemeral
- Their functionality is limited

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Long-term Relationships

- Channels (active content)
- Business-to-business links
- Long-term information gatherers (agents)

So we need

- Maintainable, long-term clients
- Fewer restrictions on functionality
- Access to persistent storage etc.

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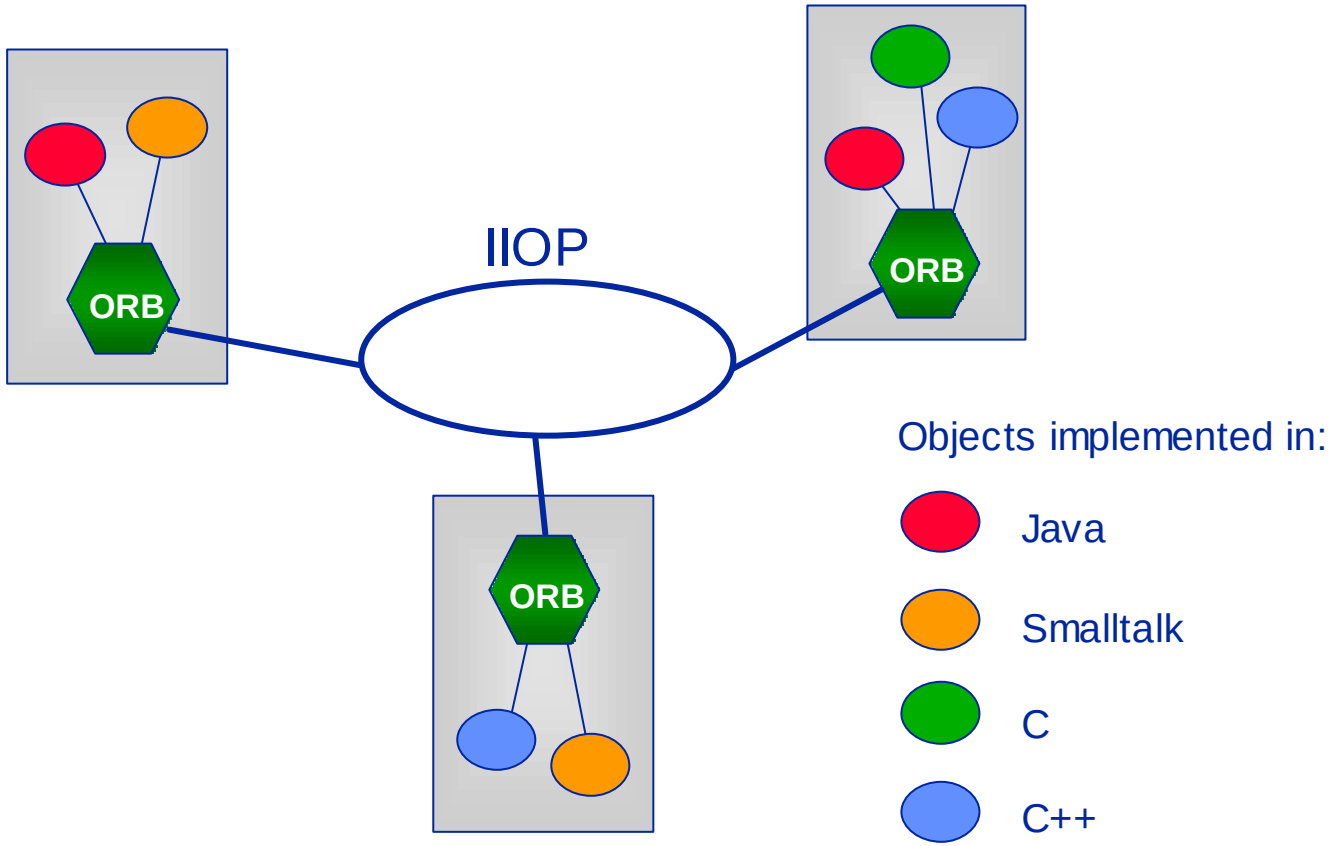
OMG OMA



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OMG OMA

- Has a well-developed architecture for distribution
- Has a wide range of supporting products
  - Visigenic, Sun, Orbix, IBM, etc.
- Growing integration of Java

BUT

- Does not address deployment
- IIOP causes problems with firewalls

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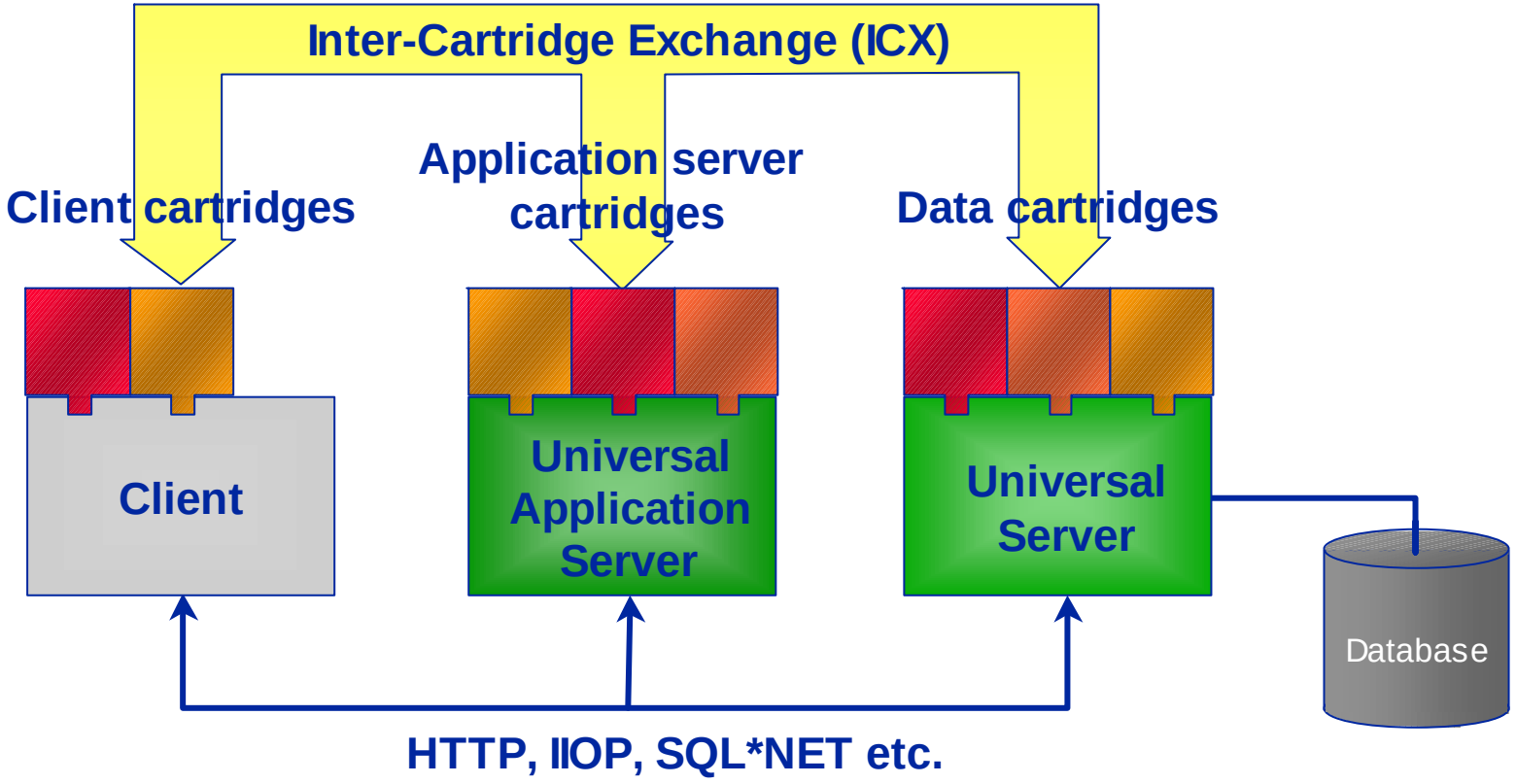
Oracle NCA



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Oracle NCA

- Tries to fit existing pieces into a coherent whole
- Makes use of Java and CORBA
- Has a component concept in its cartridges

BUT

- No interfaces have yet been published
- Effort seems concentrated on vertical integration
- No apparent links to Beans and JECF cassettes

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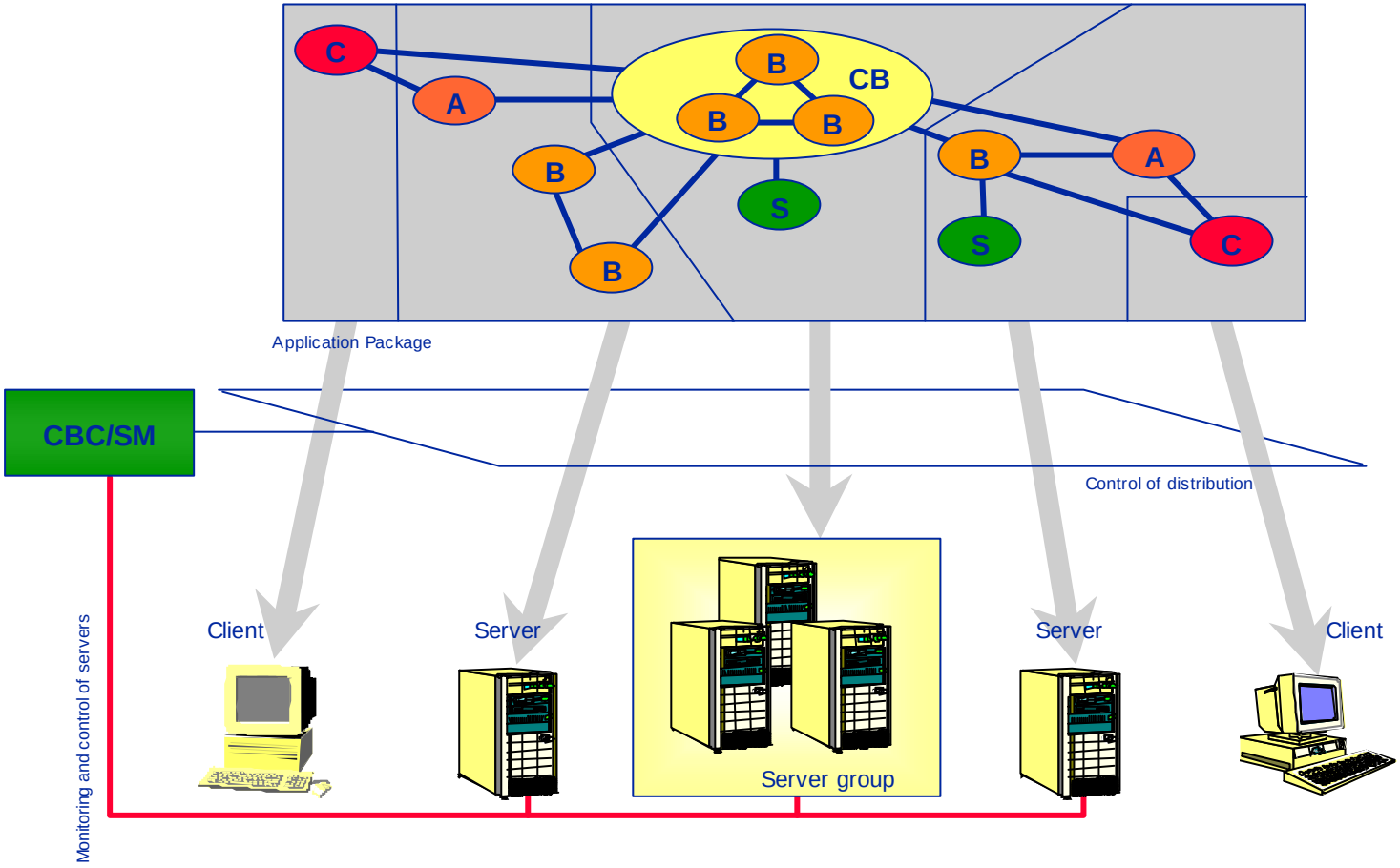
IBM Component Broker



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IBM Component Broker

- Addresses distribution and deployment
- Leverages existing technologies
- Can cope with some dynamicism

BUT

- Distribution and deployment choices are still manual
- Agents are not integral
- It’s not here yet!

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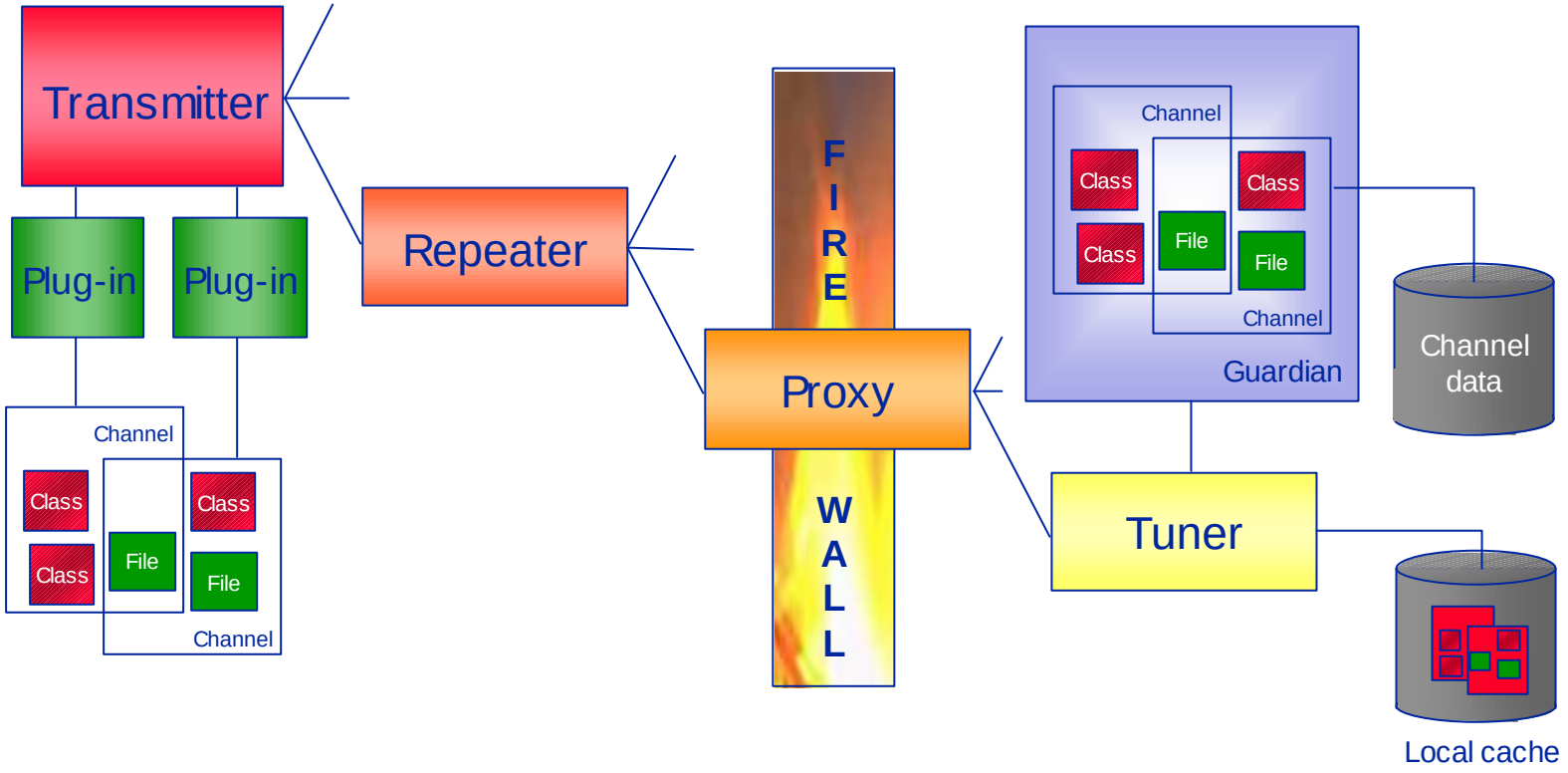
Marimba Castanet



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Marimba Castanet

- Provides deployment and efficient update facilities
- Can be tailored to fit individual users

BUT

- Client-driven
- Application (not component) based => single source

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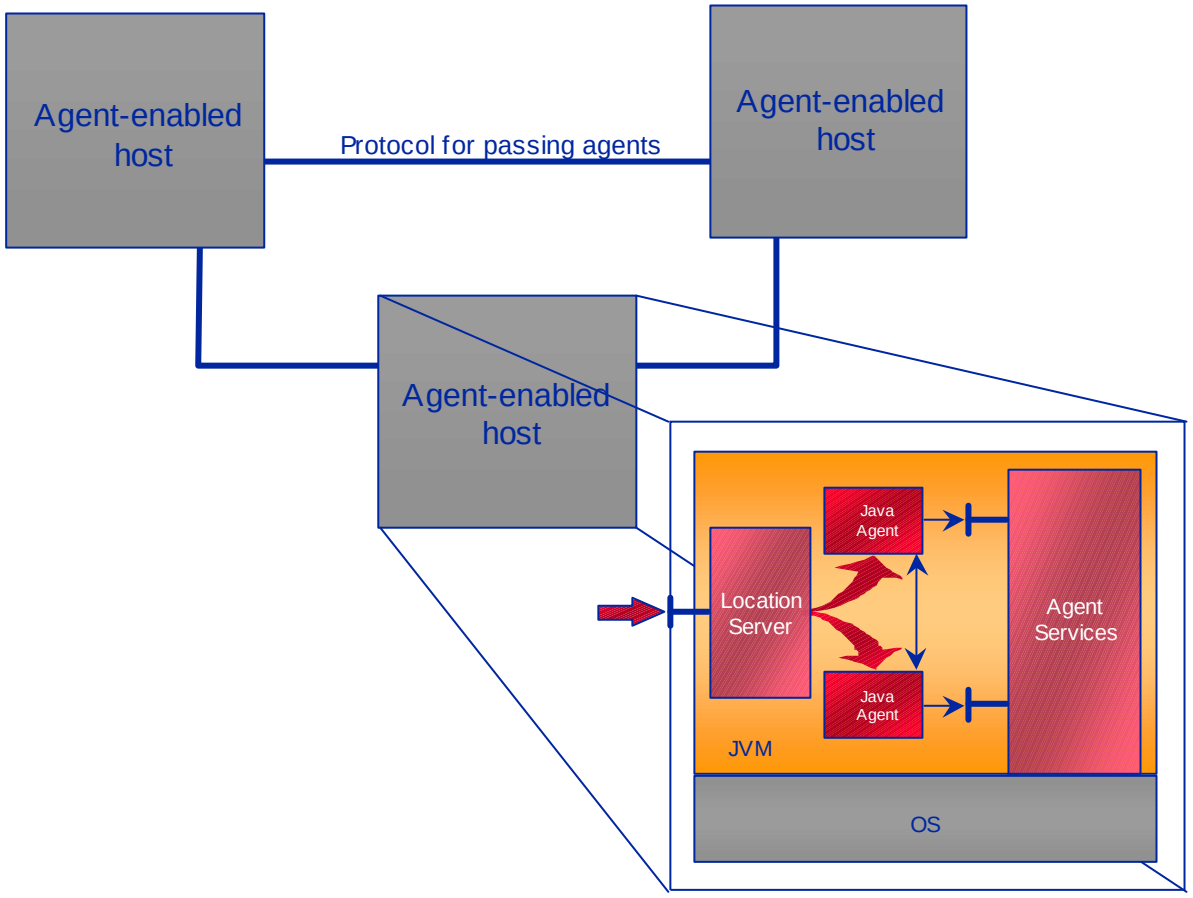
Mobile Agent Systems



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Mobile Agent Systems

- Can be viewed as a deployment mechanism
- Allows dynamic interpretation of policy

BUT

- Deployment policy embedded in component
- No support for maintenance and update
- Solutions currently available are not generic

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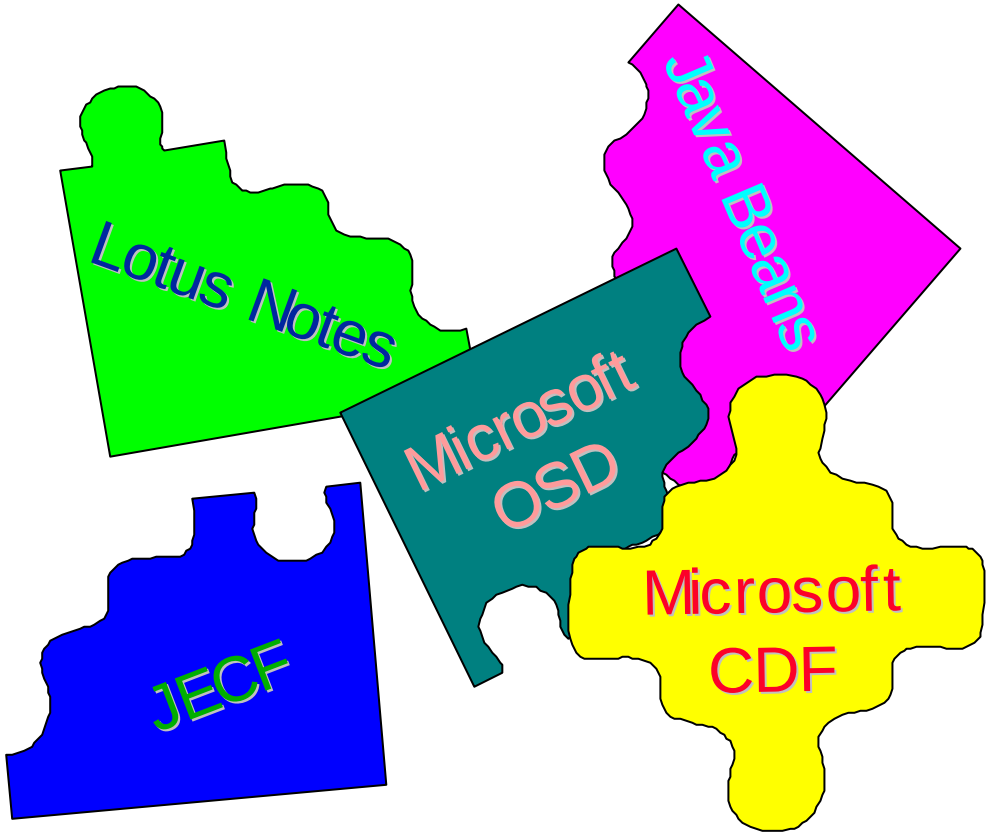
Related Technologies



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The State of the Art

Convergence. Jackson Pollock,1952, oil on canvas, 93.5” x 155” . Albright-Knox Art Gallery, Buffalo, NY, USA.

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What's Missing

- An architecture for dynamic systems
- Modularity and transparency
- A policy framework
- A legal and commercial framework

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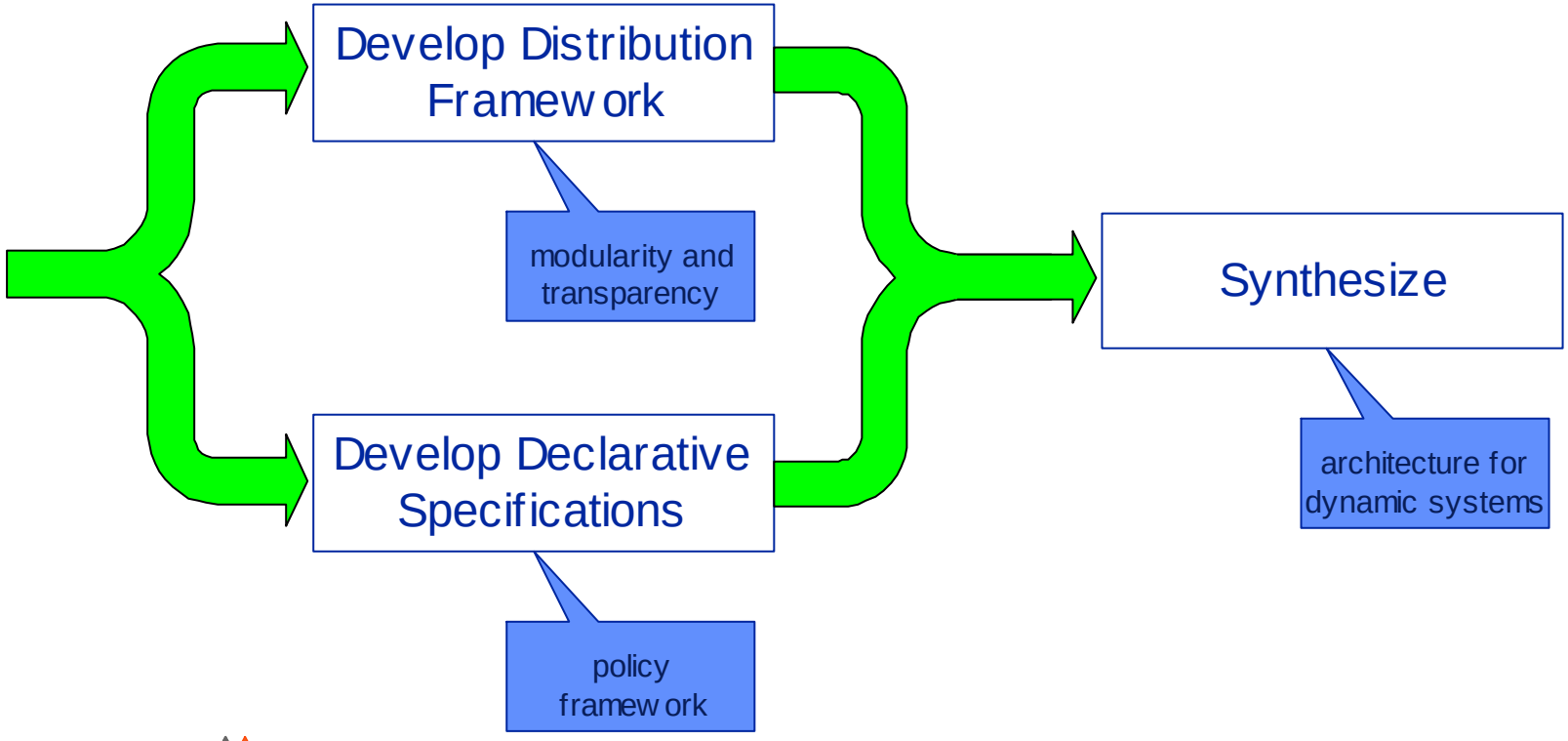
FlexiNet



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