Actional

Leveraging the Strengths of Disparate Component Systems Across Enterprises

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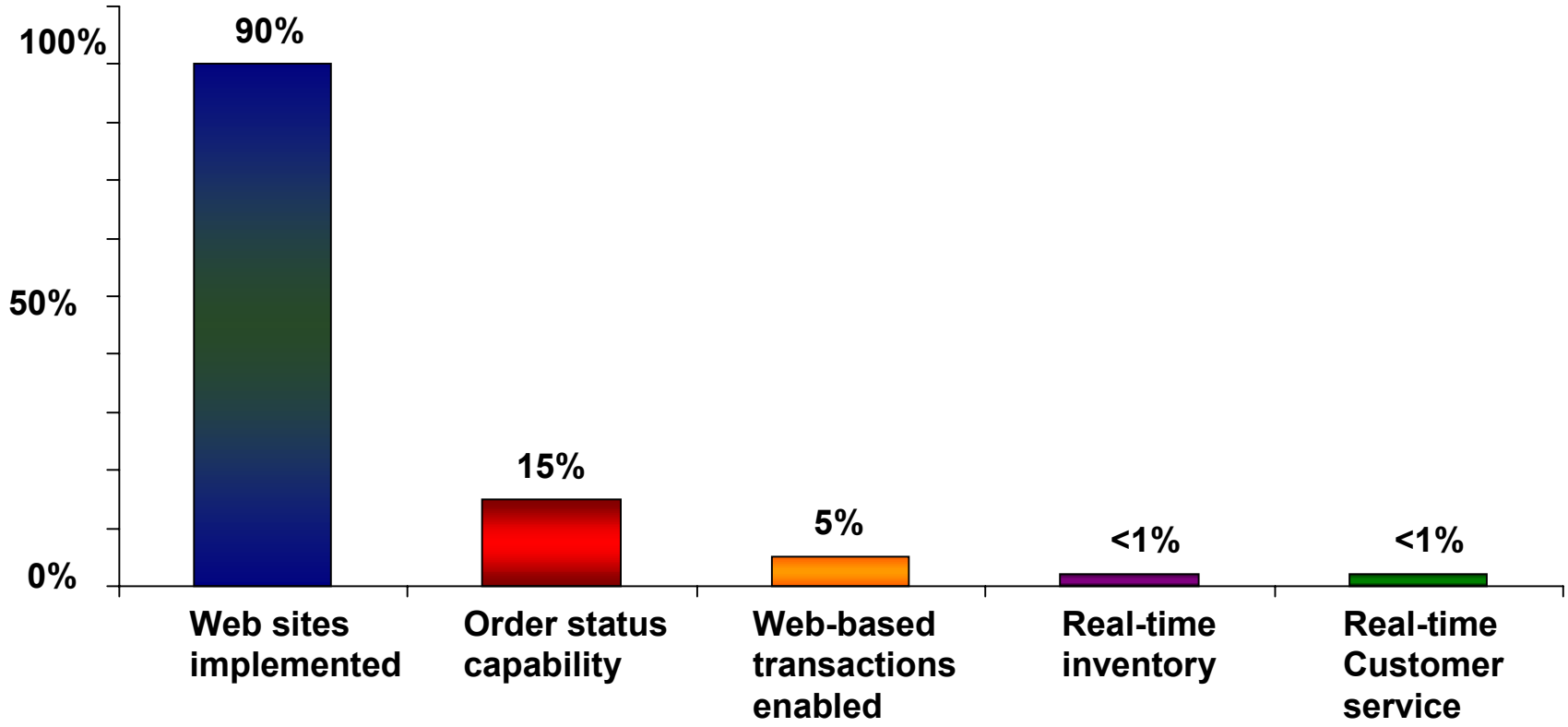
Founder and Chairman
Actional

Actional at a glance

- **Headquartered in Silicon Valley; nine offices worldwide**
- **Proven, patented application integration products shipping since 1996**
- **Global 2000 customers with e-Business requirements for high-performance, high-transaction levels**
- **Investors: NEA, International Capital Partners, NeoCarta, private investors**

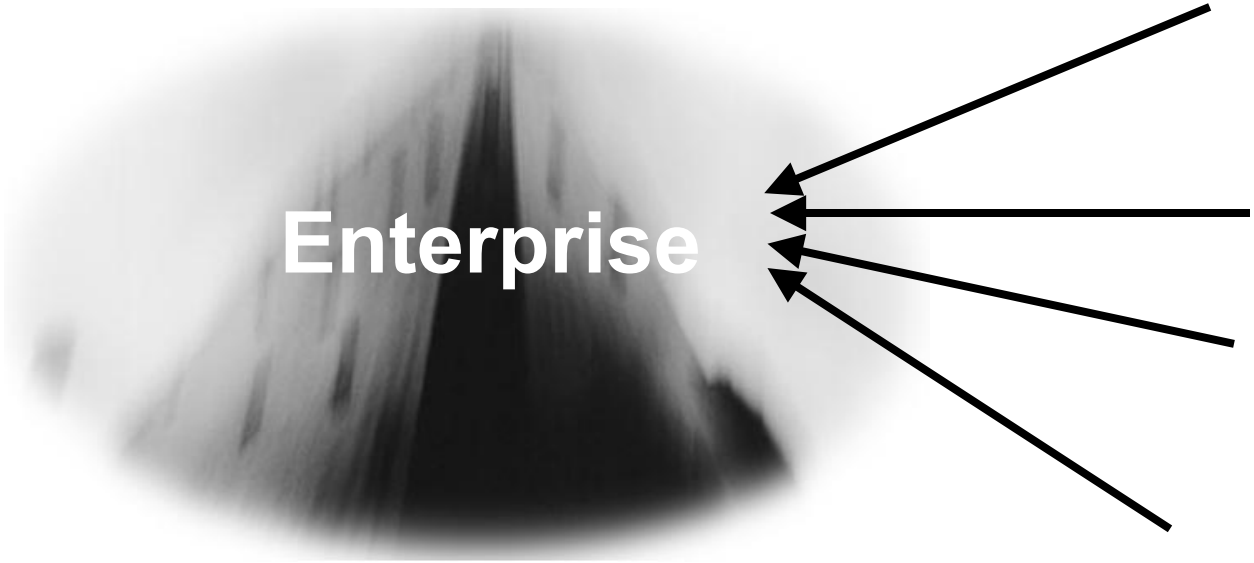
e-Business is still in its infancy



Source: AMR Research

The focus of e-Business development now: multi-channel, zero-latency interaction

Integration between customer-facing and back-end systems




e-Commerce

Self Service


Order Entry


Service

will become THE success factor in any form of e-business

Multi-channel, zero latency interaction drives unique integration requirements

Personalized interaction vs. process automation

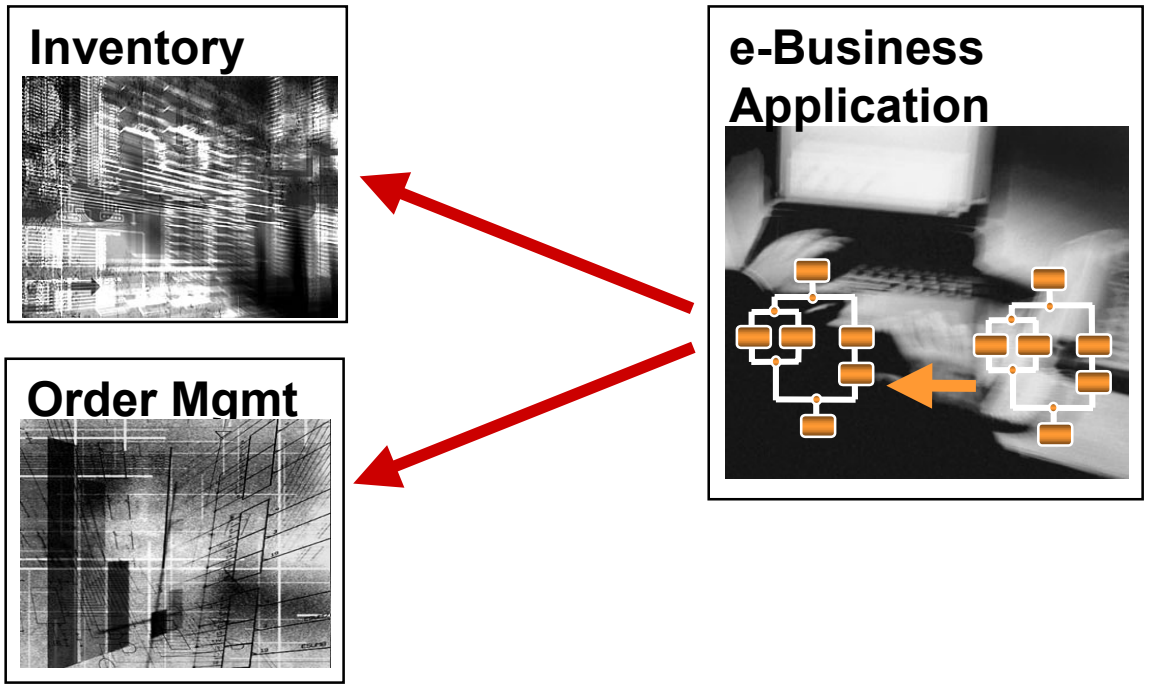
Control of business actions in the hands of the customer, service rep, agent

Zero-latency response time

Maximum scalability

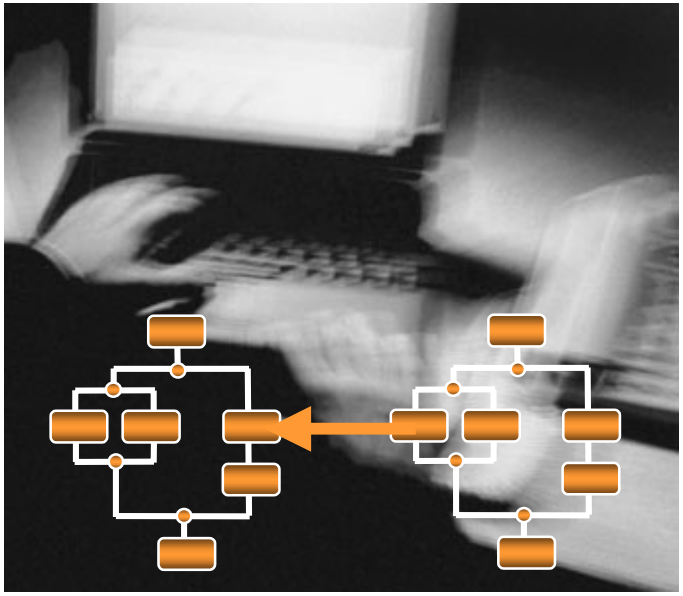
There's a new category that address these unique requirements: Control Brokers

Control Brokers give e-Business applications direct control of business services contained in back and front-office applications – despite differences in underlying "component models"



Control Brokers Are Different

Actional Control Broker

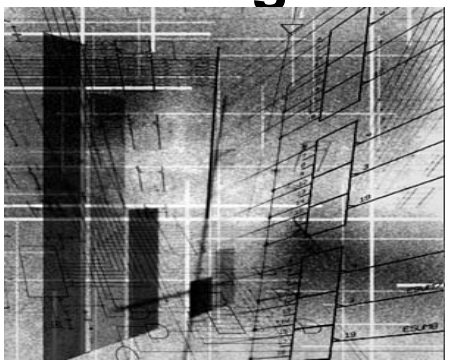


- **Direct connection for performance, flexibility**
- **Unrestricted access to business processes**
- **Turns any extensible application into an "integration hub"**
- **Does not alter existing ERP, legacy systems or add new middleware**

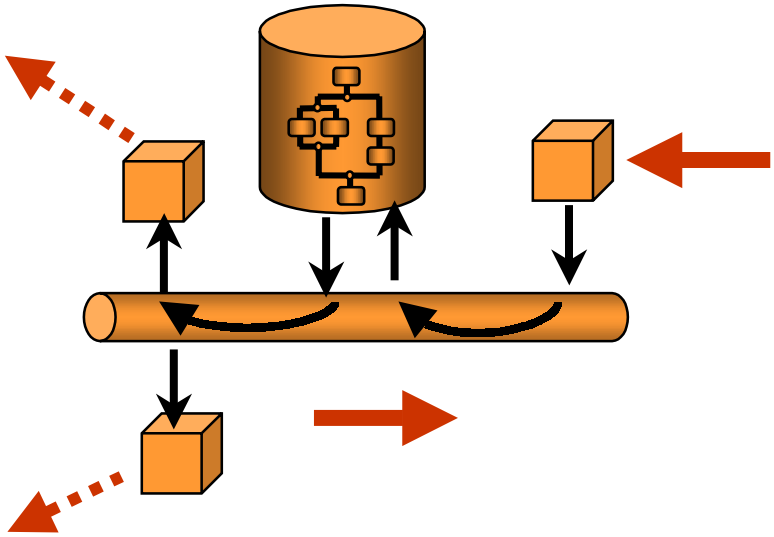
EAI architectures are not optimized for multi-channel, zero-latency interaction

Inventory

Order Mgmt



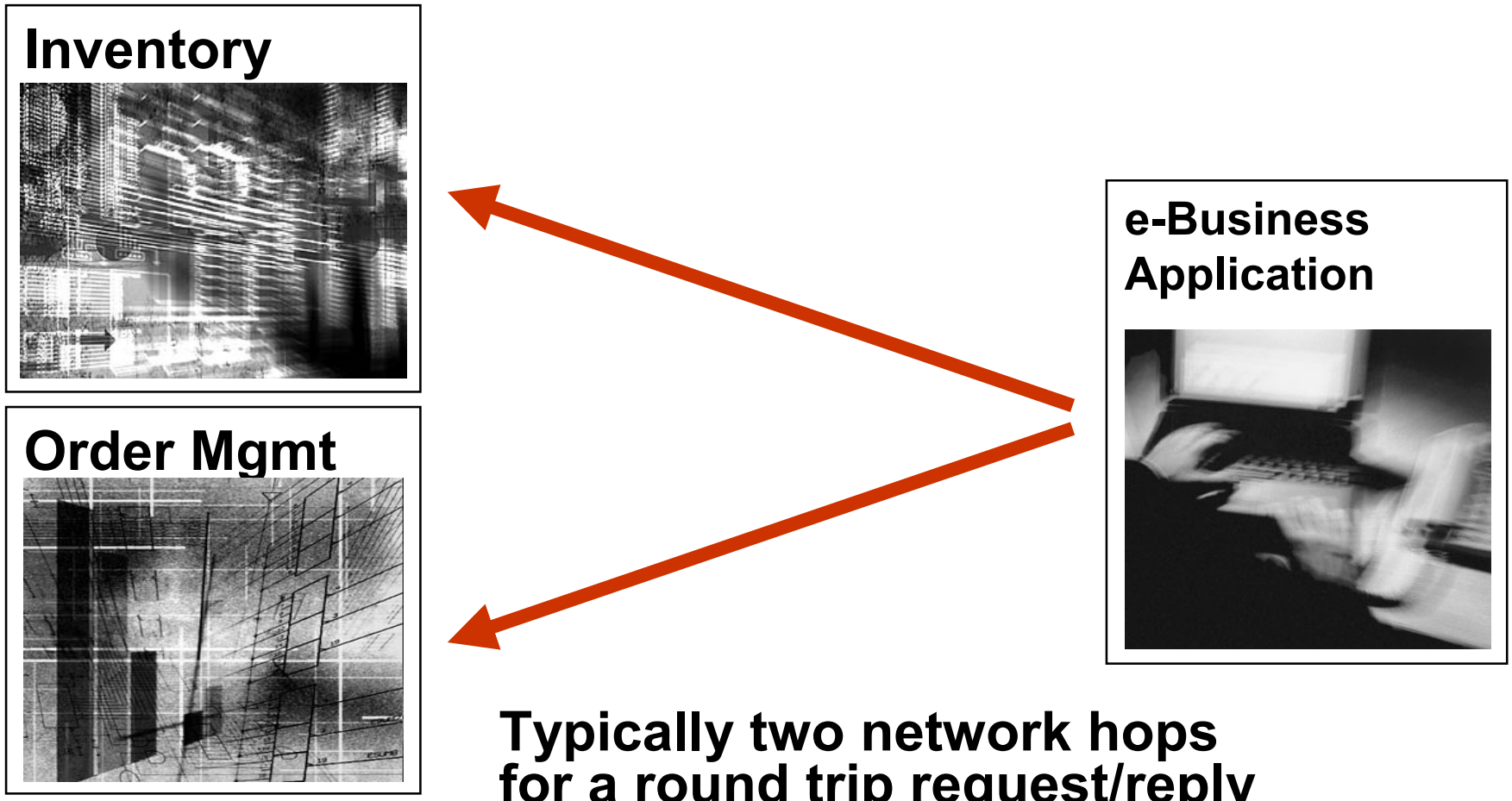
Up to eight network hops for a single round trip request/reply



e-Business Application

Personalization and recommendation?

Control Broker architectures are optimized for multi-channel, zero-latency interaction



Typically two network hops for a round trip request/reply

Actional Control Brokers – Real-time response that scales

- **Benchmark Scenario**
  - Hardware – 4x400MHz processor Sparc, 2MB Cache
  - Request/reply, 22KB real-world data per request
- **Benchmark Results**
  - 24x Faster then our nearest competitor in customer led bake-off
  - 419 transactions/second
    - **Throughput of one server can saturate a 100MB network**
  - Linear scalability as client loads increase
  - Minimal introduced latency
- **Independent benchmark validation**

Easy implementation, rapid deployment - browse, select, connect!

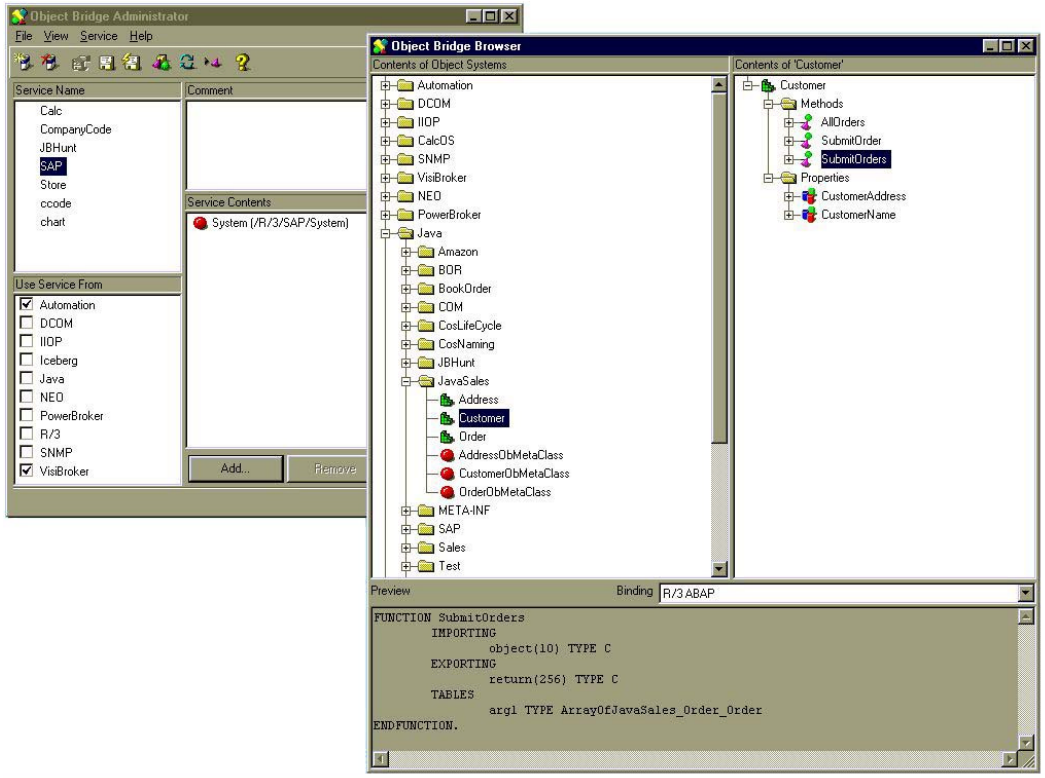
Intershop enfinity -> R/3

EJB -> R/3

C1 -> PeopleSoft

R/3 -> PeopleSoft

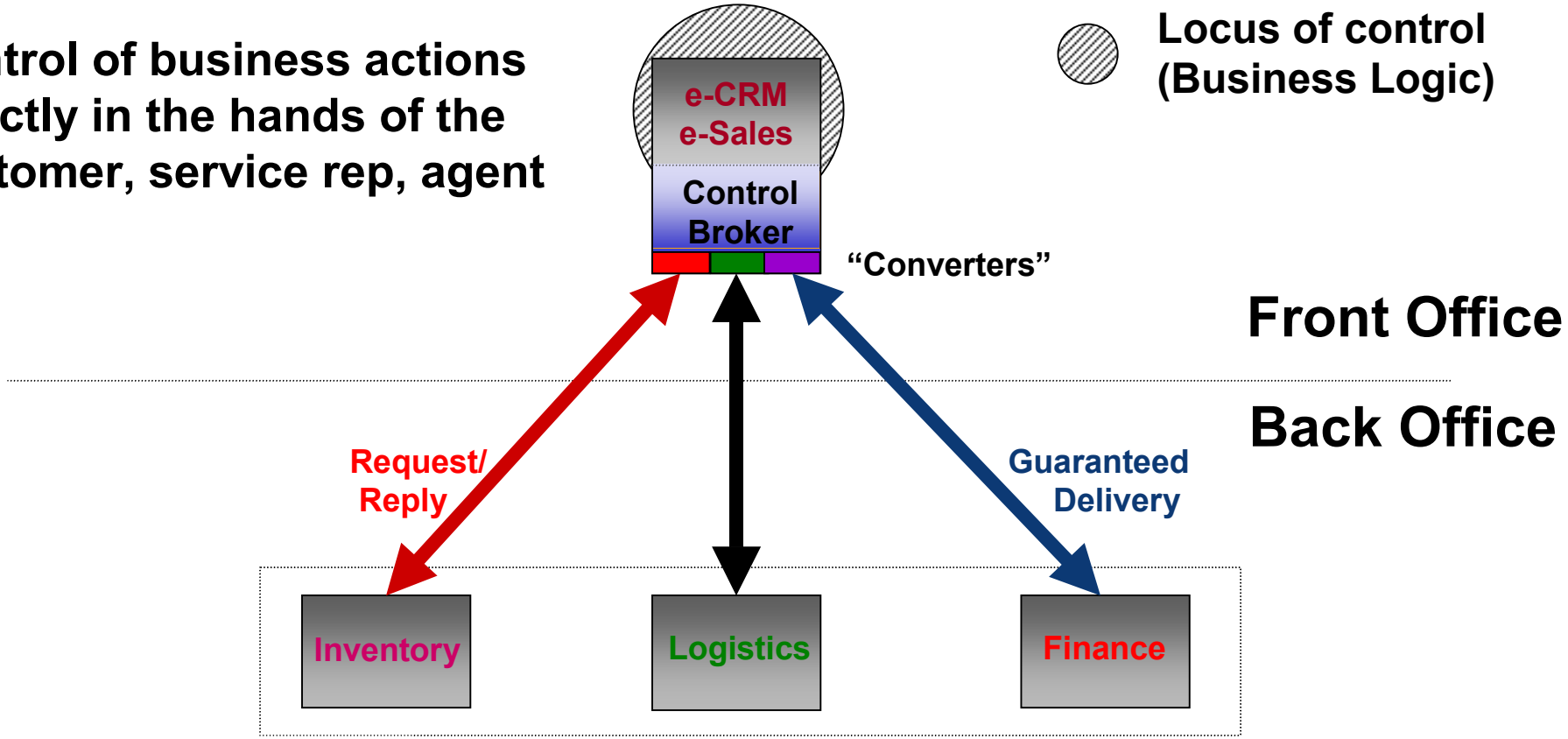
R/3 ITS -> Legacy



- **Rapid productivity and minimal training**
- **Extremely deep product**
- **Eliminates low value interface coding**

How do Control Brokers work?

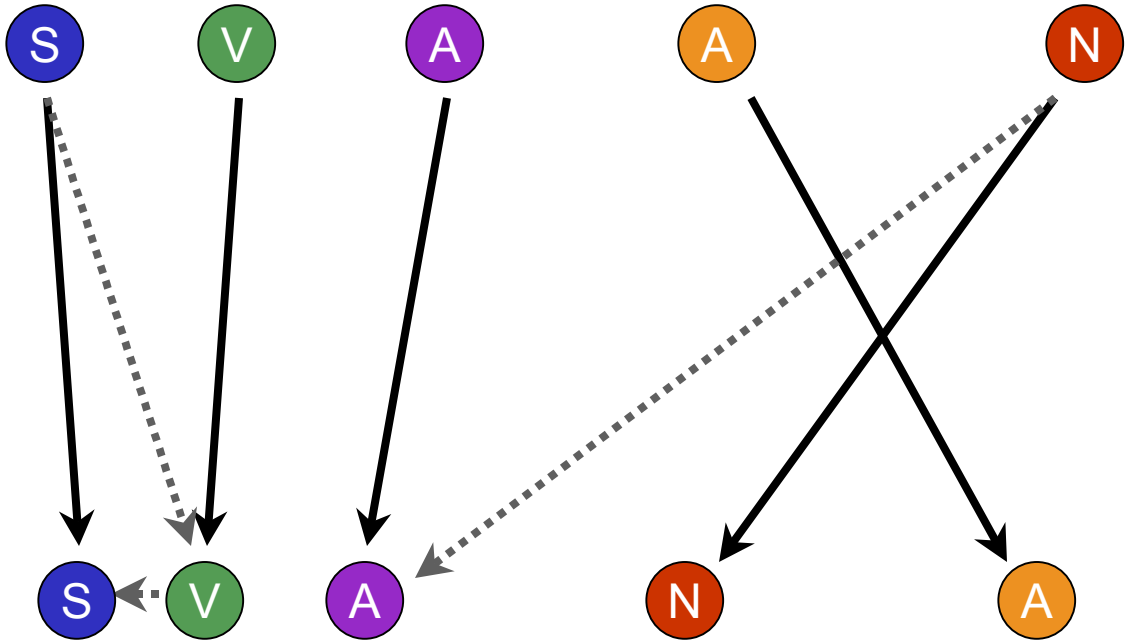
Control of business actions directly in the hands of the customer, service rep, agent



Two network hops for a single round trip request/reply

Single Step Conversion:
Optimal solution to NxM problem

English: I have a yellow pencil



French: J' ai un crayon jaune

Examples of "Parts of Speech" for Systems:

System Model
- Object Oriented
- Component Oriented
- Function Oriented
- Query Oriented
  - Predefined Query Oriented
  - Arbitrary Query Oriented
- Message Oriented
  - Transport Oriented
  - Format Oriented
- Screen Oriented

Access Model
- Request/reply
  - Blocking reply
  - Non-blocking reply
  - Deferred reply
- Publish/subscribe
- Directed send and forget

Security Model
- Explicit sign on
- Implicit sign on
- Delegation support
- Impersonation support
- Role based security
- ACL based security

Integrity Model
- Online transactional
  - Two phase commit
  - One phase commit
- Guaranteed delivery
  - Tx queue/dequeue
  - Tx queue (not dequeue)
  - Non-transactional
- No integrity

Publishing Model
- Polling
- Blocking
- Auto-start

Connection Management
- Multi-request per connection
  - Out of order replies
  - Ordered replies
  - Transaction per request
  - Transaction per connection
- Single request per connection
- Thread owned connection
- Single connection per process

Threading Requirements
- Multi-threaded
- Apartment threaded
- Single threaded
- Per-thread initialization

Data Presentation Model
- Structured
- Buffered
- Parsed
- Abstracted

Component State Model
- Persistent
  - Fixed size key
  - Variable size key
- Stateful
  - Persistable
  - Transient
- Session
- Stateless

Invocation Model
- Native call
- Invocation API
- Buffer transmission
- Failure behavior
  - Outputs valid (e.g. empty)
  - Outputs invalid
  - Outputs undetermined

ACBs offer a wide range of supported systems…

- **Industry Standards**
  - CICS
  - COM/DCOM
  - CORBA
  - DCE
  - EJB
  - MQ Series
  - XML
- **Middleware Backbones**
  - IBM Component Broker
  - IBM MQSeries
  - Iona Orbix
  - JDK ORB
  - Orbacus
  - Visigenic Visibroker
  - Gradient NetCrusader
- **Packaged Applications**
  - BroadVision
  - Blue Martini
  - Commerce One
  - Delano
  - Intershop
  - mySAP.com
  - PeopleSoft
  - SAP R/2 & R/3
  - Gamma Robusta
- **Standards-Based APIs**
  - Platinum Aion
  - Siebel
  - Sterling COOL:gen
  - Vantive
- **e-Business Platforms**
  - BEA Weblogic
  - BEA Tuxedo
  - IBM WebSphere
  - Microsoft ASPs
  - Oracle OAS
  - Sybase EAServer
  - Versata Jade
- **EAI Products**
  - Candle Roma
  - IONA iPortal
  - Level 8 EIT
  - Oracle OAI
  - Vitria Businessware

Actional Control Brokers at work…

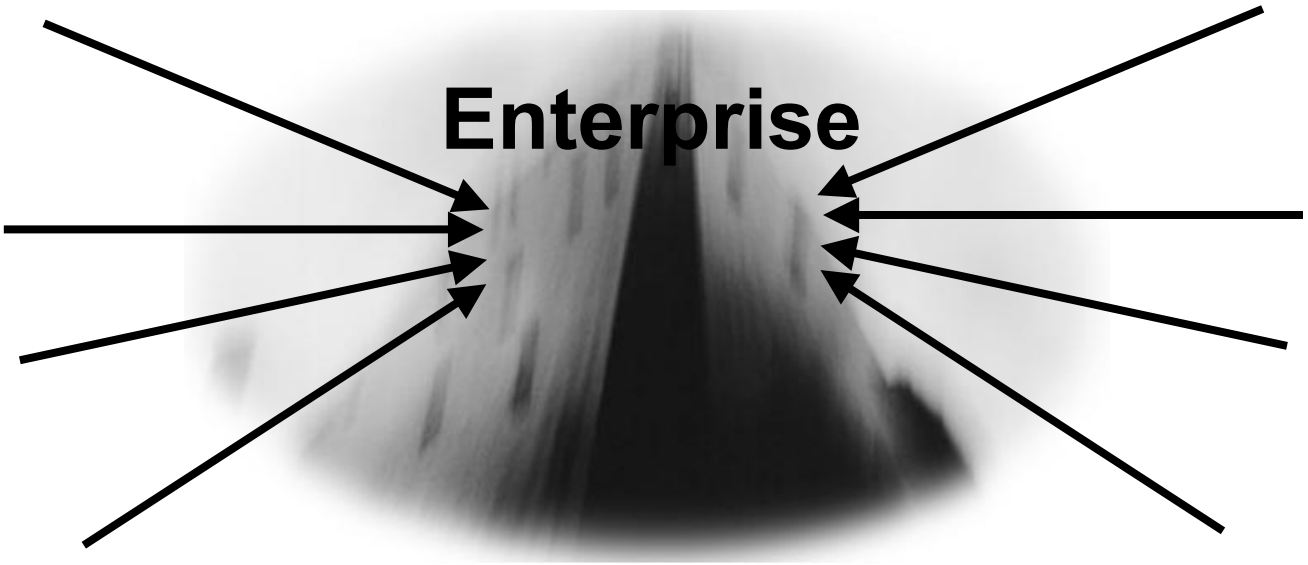
Forward Control	Customer	Application
… from SAP,Web, C1	swisscom	Customer service B2B Web self-service •••
… from BroadVision	Rockwell Collins	B2B online purchasing
… from the Web	Prudential	Auto loan origination
… from EAI	VITRIA TECHNOLOGY, INC.	OEM embedded subset
… from everywhere	Be Bullish	Best-of-breed integration backbone

Actional Control Broker Business Benefits

- **Shortest time-to-value for "e- projects"**
- **Ease of use - Rapid productivity, minimal training**
- **Use existing skills base & tools across applications**
- **One business process end-to-end**
  - Reduced complexity; more rapid delivery and change
- **Eliminates costly, inflexible "glue coding"**
  - Save 25-40% of project budgets - or more
  - Even with app customization & changing business rules
  - Significantly lower services content – focus resources on business value
- **Very high performance; scalable; reliable; secure**

Multi-channel, zero-latency interaction and the marketplace

Integration between customer-facing and back-end systems



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e-Commerce

Self Service

Order Entry

Service

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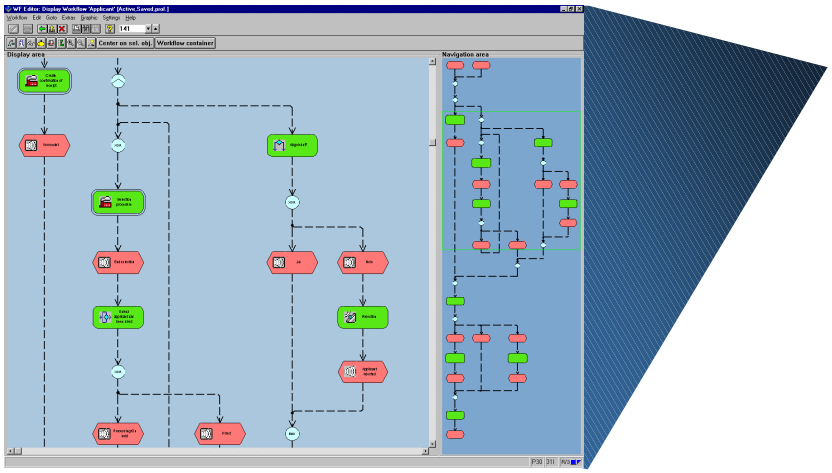
<u>And</u> marketplace services will become THE success factor in any form of e-business

Questions?

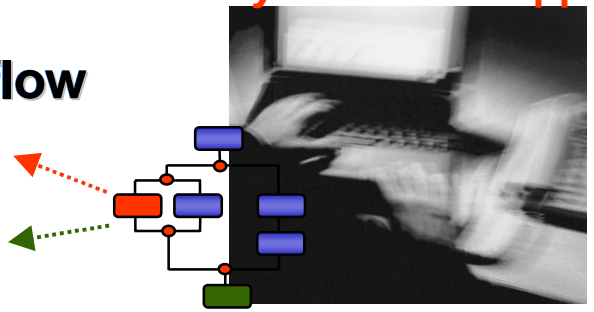
Questions?

Modern Applications Provide Tools: Use *Any* Application Tool for Integration



Business Workflow

any extensible app



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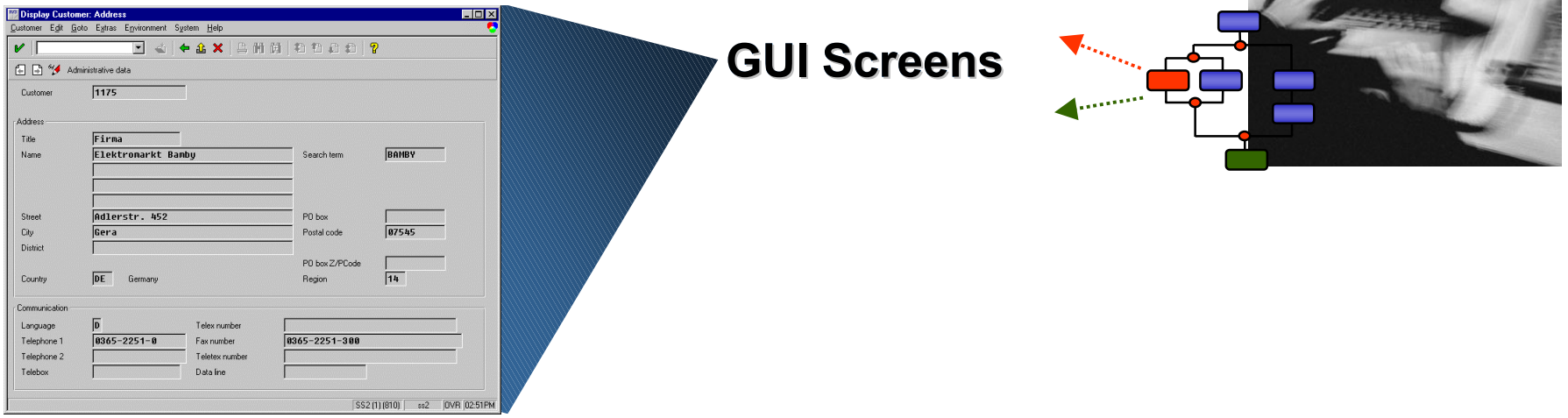

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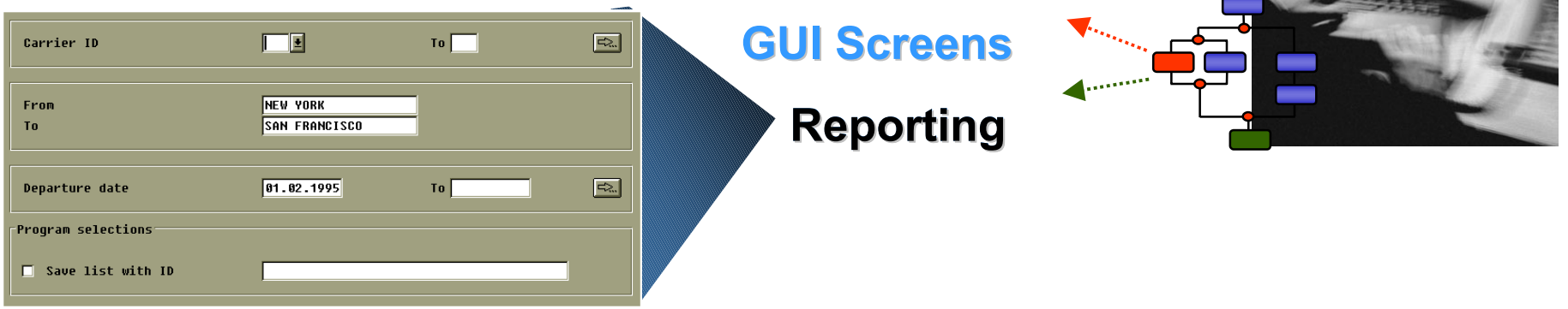

Return

Questions?

A proven platform with a broad, deep feature set

- **A robust, proven platform**
  - 1,000,000+ lines of code
  - 70+ person R&D team
  - Core technology shipping since 1996
- **Ease of use; use of existing skills**
- **Graphical administration**
- **Business service level control**
- **Automatic business service installation**
- **Seamless use of 3rd party tools**
  - Configuration control; modeling;
  - Development & ("three headed") debugging;
  - QA & regression; performance tuning; deployment; etc.
- **Debugging and tracing tools**
- **Performance**
  - Single network hop
  - Results caching
  - Response scheduling
  - Content-based QoS selection
- **Scalability**
  - Connection pooling, concentration and farming
  - Multi-threaded request handling & thread model mediation
  - Load balancing; load balanceability; and dynamic load management
- **Reliability**
  - 3-way error and exception handling
  - Guaranteed delivery
  - Transaction coordination
    - **Full 2PC; 1 PC; non-transactional functions**
    - **Logging, audit; viewing status and replay**
  - Watchdog & restart
- **Security coordination**
  - Session-based
  - Role-based
  - Security delegation
  - X.509 certificates
  - Sandboxing
- **Deployment and administration**
  - Use of system tools
  - Silent deployment
  - SNMP-based management of the overall "system"
- **Project-level integration control**
  - "Project packaging"
  - Interface restriction
  - Resource allocation