Eclipse the Rich Client Platform

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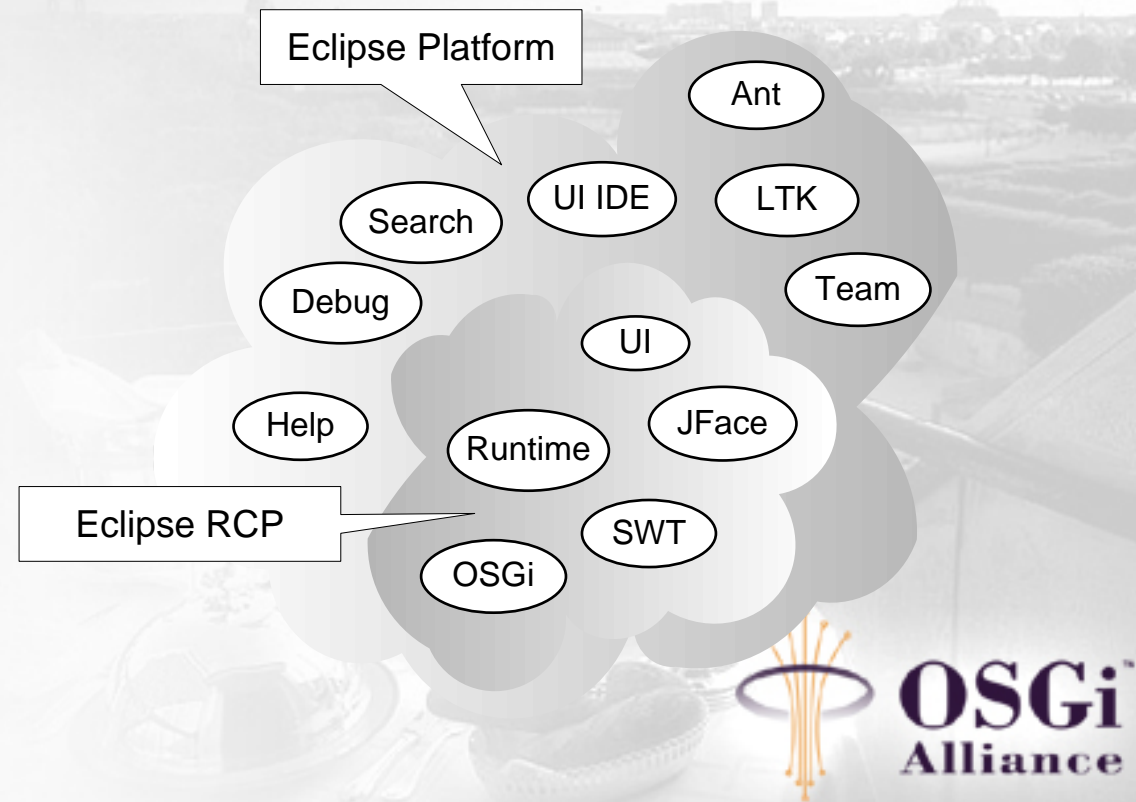### Eclipse RCP Lead

OSGi Alliance

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Desktop OSGi Applications

What is the Eclipse Rich Client Platform

While the Eclipse Platform is designed to serve as an open tools platform, it is architected so that its components can be used to build just about any client application. The minimal set of plug-ins needed to build a rich client application is collectively known as the **Rich Client Platform**.

- A subset of the full Platform
- There are other subsets

Eclipse Platform

Ant

UI IDE

LTK

Search

Team

Debug

UI

Help

JFace

Runtime

Eclipse RCP

SWT

OSGi

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Rich Client Platforms

- Pros:
  - Look good
  - Easy to use
  - Performant
  - Disconnected
- Cons:
  - Larger client
  - Deployment
  - Maintenance

Eclipse + OSGi = no Cons!

RCP Applications

- Wide range of use domains
  - Device management
  - Banking
  - Research
- Secret Sauce

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GumTree – Scientific Instrument Control

Help · Actions

OpenFinancial Teller   S1 Enterprise Teller   Customer Service   My Workplace

IBM   open *financial network*   IBM

Customer Search | Account Search

Enter Lastname:		Search
Enter Firstname:		Search
Enter SSN:		Search
Enter Account:		Search
All Accounts:		Search

10 accounts are found

Customer Profile

Name: John William   SSN: 123-45-6789   ★★★★☆

Address: Email:
345 Anderson St   abc@xyz.com
New York, NY-10001
USA
Phone Home: 123-456-7890
Phone Work: 231-456-7890

Accounts

Account Number	Account Type	Available	Balance	

Account Details

Number: 294311310736   Type: Checking
Balance: 6400.0   Available: 5400.0

Customers

John   William   123-45-6789

Recent Transactions

Date	Transaction Type	Amount	Balance	
11/4/04	Cash Withdraw	-4500.0	6400.0	
11/4/04	Cash Deposit	900.0	10900.0	
8/10/04	Cash withdraw	-500.0	10000.0	

Customer Search Results

First Name	Last Name	SSN	
Alice	Sheen	123-45-6789	
John	Smith	333-22-2323	
Jane	Doe	999-11-2839	
John	William	123-45-6789	
John	Carter	123-45-9876	
Jane	Mary	999-11-2839	
Karen	Mary	333-22-2323	
Alfred	Garcia	469-57-8279	
John	Walker	687-43-6587	
Mike	Blair	745-98-6775	

Deposit | Withdraw

Account Number: 294311310736
Transit Number: 12345
Type: Checking
Balance: 6400.0
Available: 5400.0

Deposit Amount: [   ]

Deposit Type: ⦿ Cash
               ○ Check

[Deposit]

Account Search Results

Account Number	Account Type	Account Balance	
294311310536	Checking	23099.0	
294311310535	Savings	40198.0	
294311310736	Checking	6400.0	
294311310735	Savings	364344.0	
294311310836	Checking	1000.0	
294311310835	Savings	6000.0	
3456876554328754	Visa	12934.0	
4708294311310836	Mastercard	59.39	
294322330936	Checking	2300.0	
294322330935	Savings	3000.0	

Gi
ance

Extras ▾ | ⏻ Shutdown | ✖ Logoff | 🔒 Lockup | Task List | Change Password | 🌐 Locale | ⌨ Keyboard

Maestro – NASA Space Mission Management

What do these have to do with OSGi?

- Implemented on top of OSGi
- OSGi component architecture is key
- Bundles assembled into applications

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Think beyond the device

- Server
- Neutron Beam Instruments
- Hand held
- Desktop
- Medical instruments
- Cars

Everything is a device

Focus on components

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Components change the game

- Components enable composition
  - Isolate and insulate
  - Provide terminology for defining interaction
- NASA Maestro
  - Distributed development teams
  - Assemble applications/suites frequently and quickly
  - Control function availability
  - World-class features and function

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Demo

- Developing an RCP application
- Kiosk

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RCP Summary

- Rich set of functionality
  - Help, Update, COM/OLE, Reporting, …
- Pervasive Plug-in/Bundle architecture
- Extensible
- Scalable
  - Supports large products (e.g., RAD, Lotus Workplace)
  - Scales down to embedded devices (eRCP, JCL/Foundation)
- Customizable (see examples)
- Dynamic

**OSGi-based
Middleware for Applications**

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Reference Material

- Eclipse – http://eclipse.org
- RCP – http://eclipse.org/rcp
- Equinox – http://eclipse.org/equinox
- RCP Book – http://eclipsercp.org

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