Composite UI Application Block

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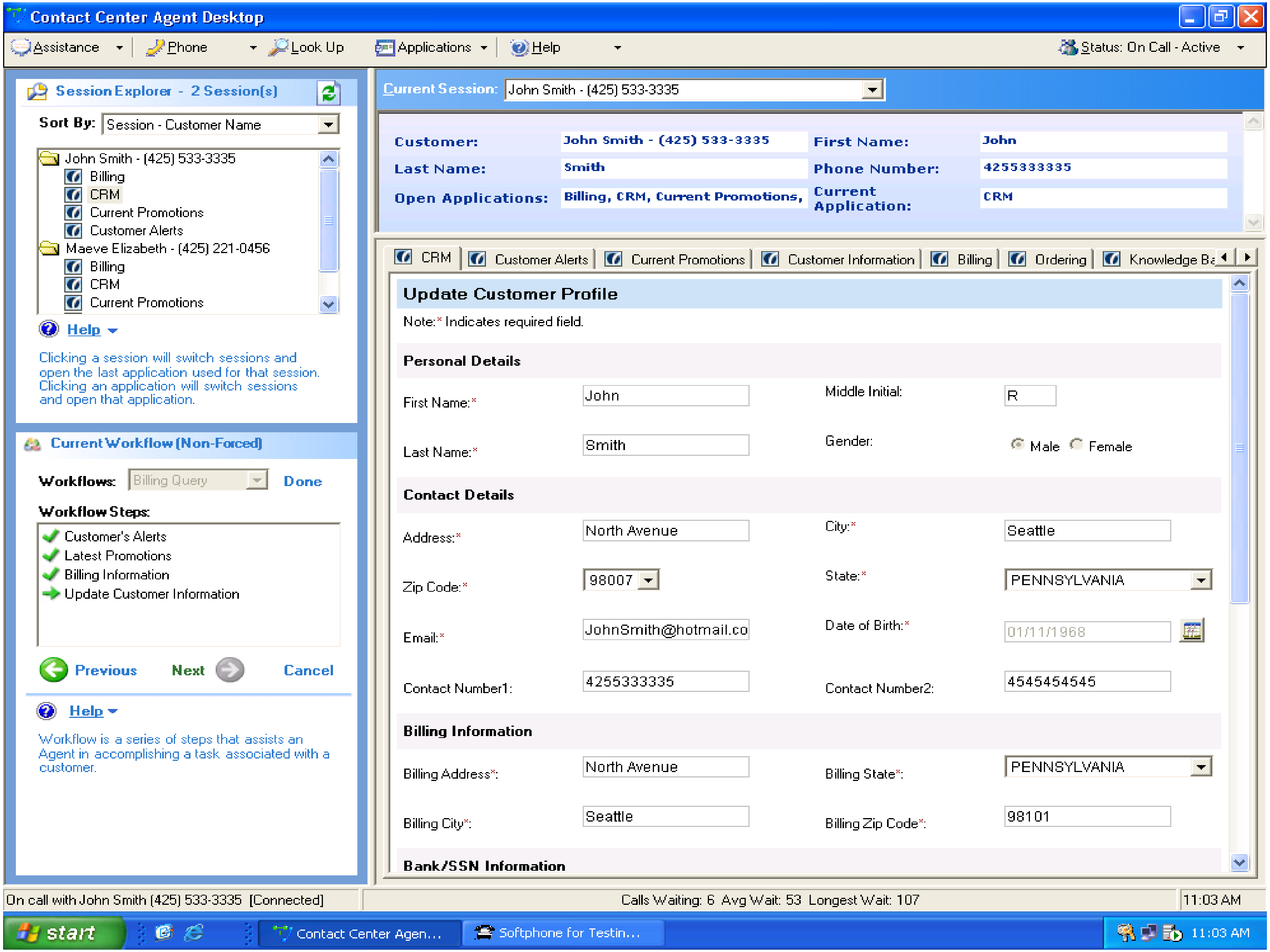
What is a Composite Smart Client?



Session Explorer - 2 Session(s)

Sort By: Session - Customer Name

- John Smith - (425) 533-3335
  - Billing
  - CRM
  - Current Promotions
  - Customer Alerts
- Maeve Elizabeth - (425) 221-0456
  - Billing
  - CRM
  - Current Promotions

Clicking a session will switch sessions and open the last application used for that session. Clicking an application will switch sessions and open that application.

Current Workflow (Non-Forced)

Workflows: Billing Query

Workflow Steps:

- ✓ Customer's Alerts
- ✓ Latest Promotions
- ✓ Billing Information
- → Update Customer Information

Workflow is a series of steps that assists an Agent in accomplishing a task associated with a customer.

Current Session: John Smith - (425) 533-3335

Customer:	John Smith - (425) 533-3335	First Name:	John
Last Name:	Smith	Phone Number:	4255333335
Open Applications:	Billing, CRM, Current Promotions,	Current Application:	CRM

Update Customer Profile

Note:* Indicates required field.

Personal Details

First Name:*	John	Middle Initial:	R
Last Name:*	Smith	Gender:	● Male ○ Female

Contact Details

Address:*	North Avenue	City:*	Seattle
Zip Code:*	98007	State:*	PENNSYLVANIA
Email:*	JohnSmith@hotmail.co	Date of Birth:*	01/11/1968
Contact Number1:	4255333335	Contact Number2:	4545454545

Billing Information

Billing Address*:	North Avenue	Billing State*:	PENNSYLVANIA
Billing City*:	Seattle	Billing Zip Code*:	98101

Bank/SSN Information

On call with John Smith (425) 533-3335 [Connected]

Calls Waiting: 6 Avg Wait: 53 Longest Wait: 107

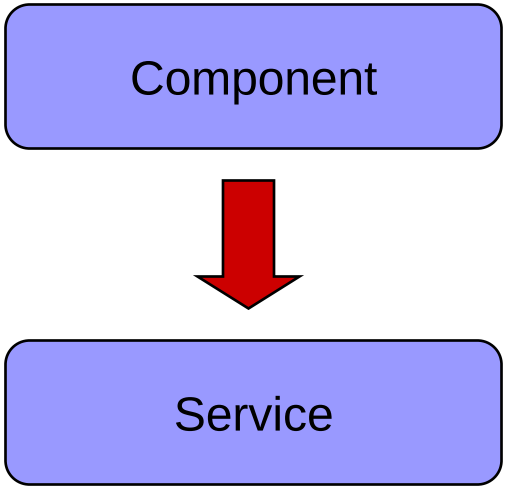
11:03 AM

Technology

Dependency Injection

The "old way": Components have intimate knowledge of services

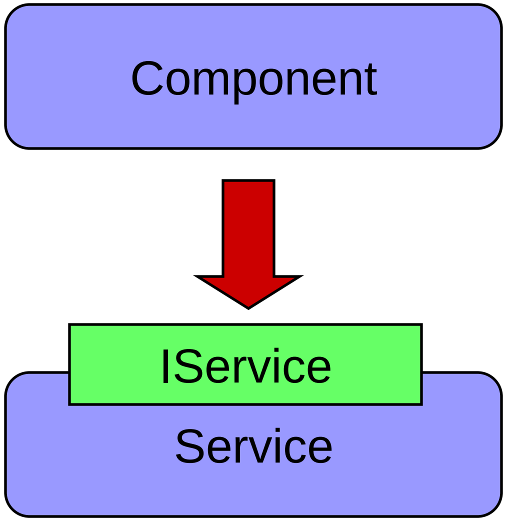
```
public class Component
{
   private Service svc = new Service();
}
```



Dependency Injection

In the right direction: Component uses services by interfaces and factories

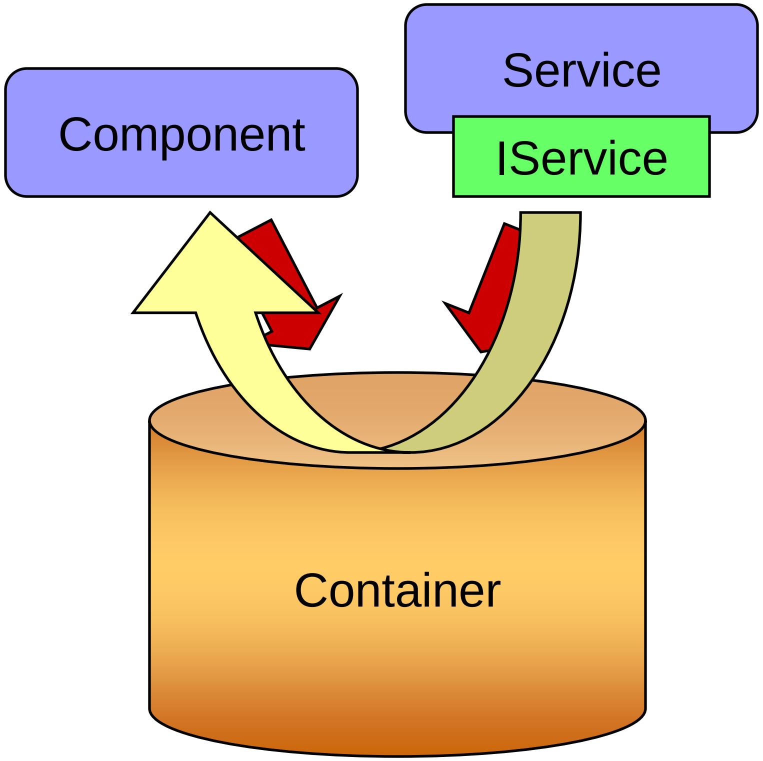
```
public class Component
{
   private IService svc = ServiceFactory.GetService();
}
```



Dependency Injection

The "CAB way":
Dependencies are injected at runtime instead of compile time

```
public class Component
{
   [ServiceDependency]
   private IService svc;
}
```



Demo

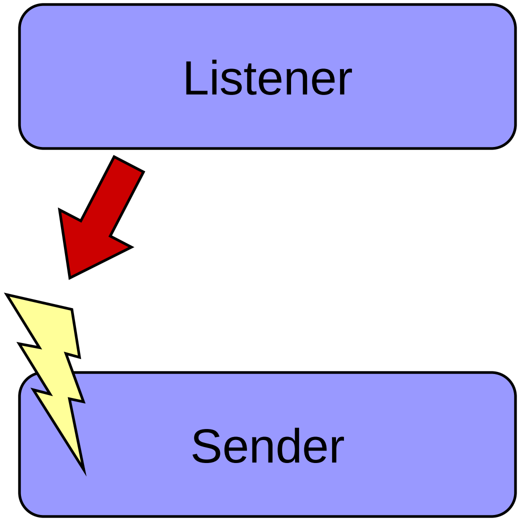
Dependency Injection

Event Broker

The "old way":
Events are wired up
at compile time

```
public class Sender {
   public event EventHandler evt;
}

public class Listener {
  mySender.evt += new EventHandler(myHandler);
}
```

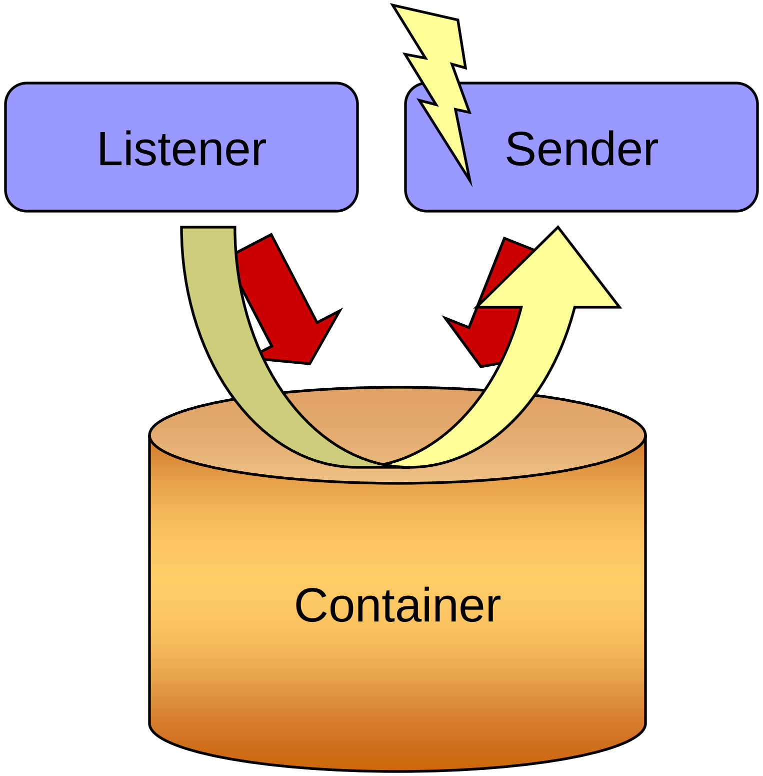


Event Broker

The "CAB way":
Events are wired up at runtime

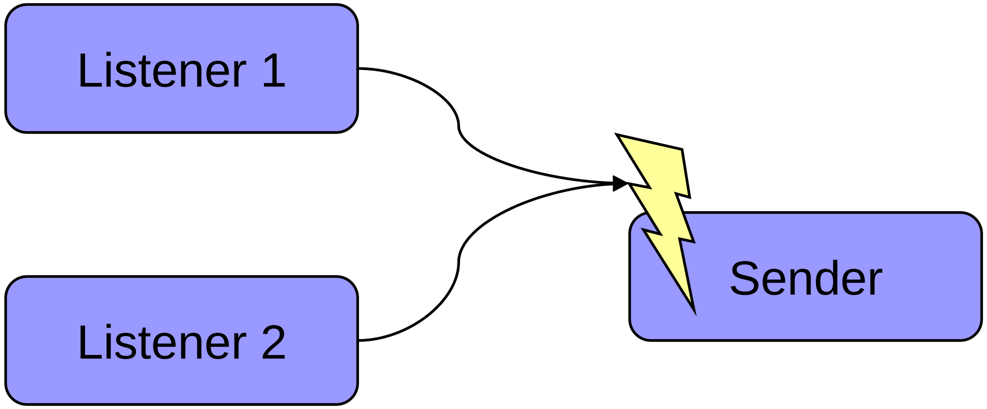
```
public class Sender {
   [EventPublication("topic://Sender/event1")]
   public event EventHandler evt;
}

public class Listener {
   [EventSubscription("topic://Sender/event1")]
   private void MyHandler(object sender, EventArgs e)
}
```



Event Broker

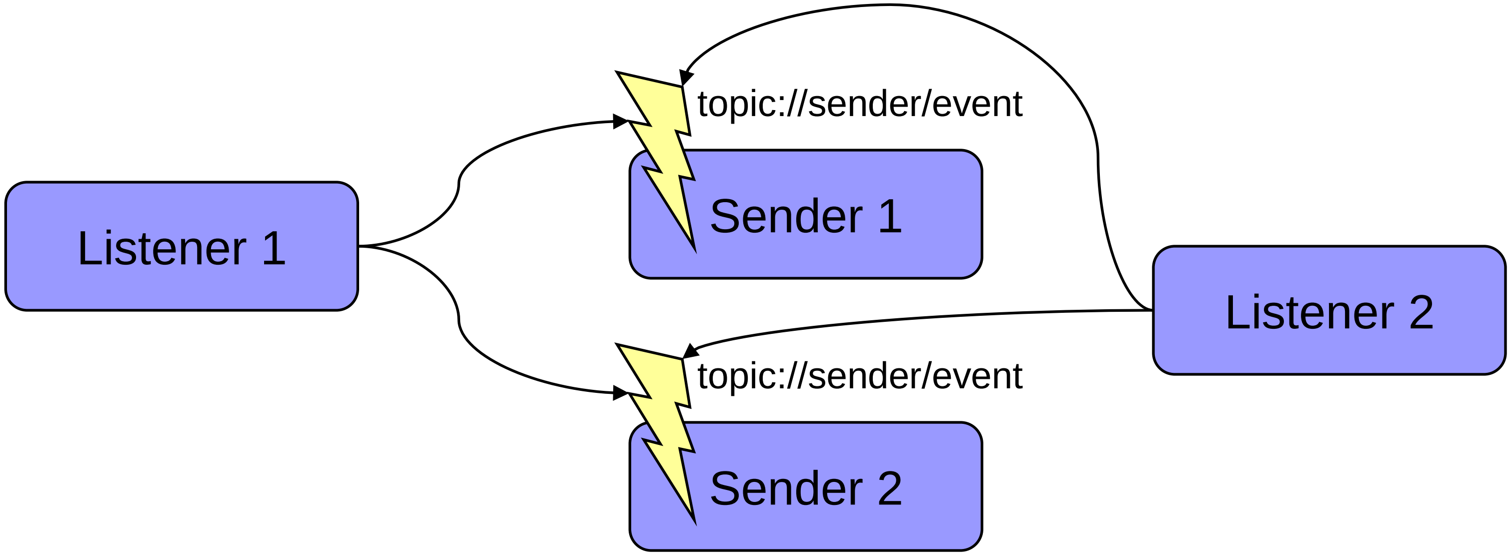
Multiple subscribers



Event Broker

Multiple publishers

Against multiple subscribers, too



Demo

Event Broker

Command Dispatching

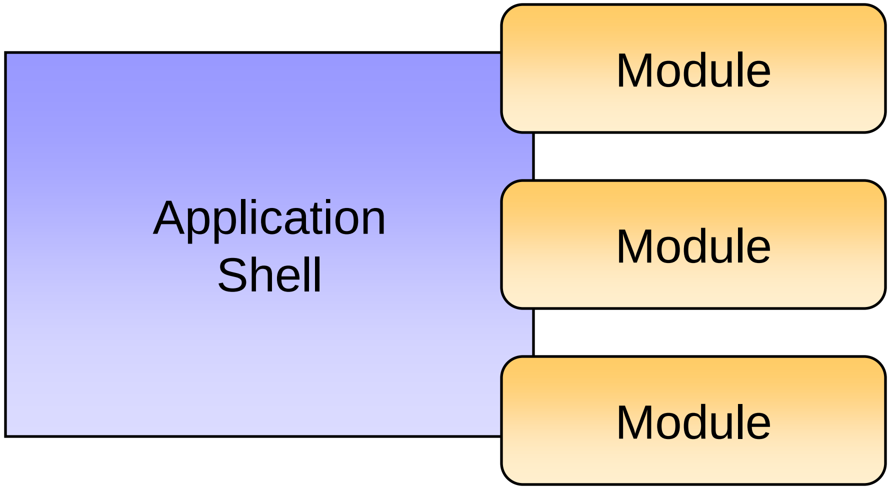
- De-couples UI elements from command handlers
- Architecture similar to Event Broker

Demo

Command Dispatching

Modules

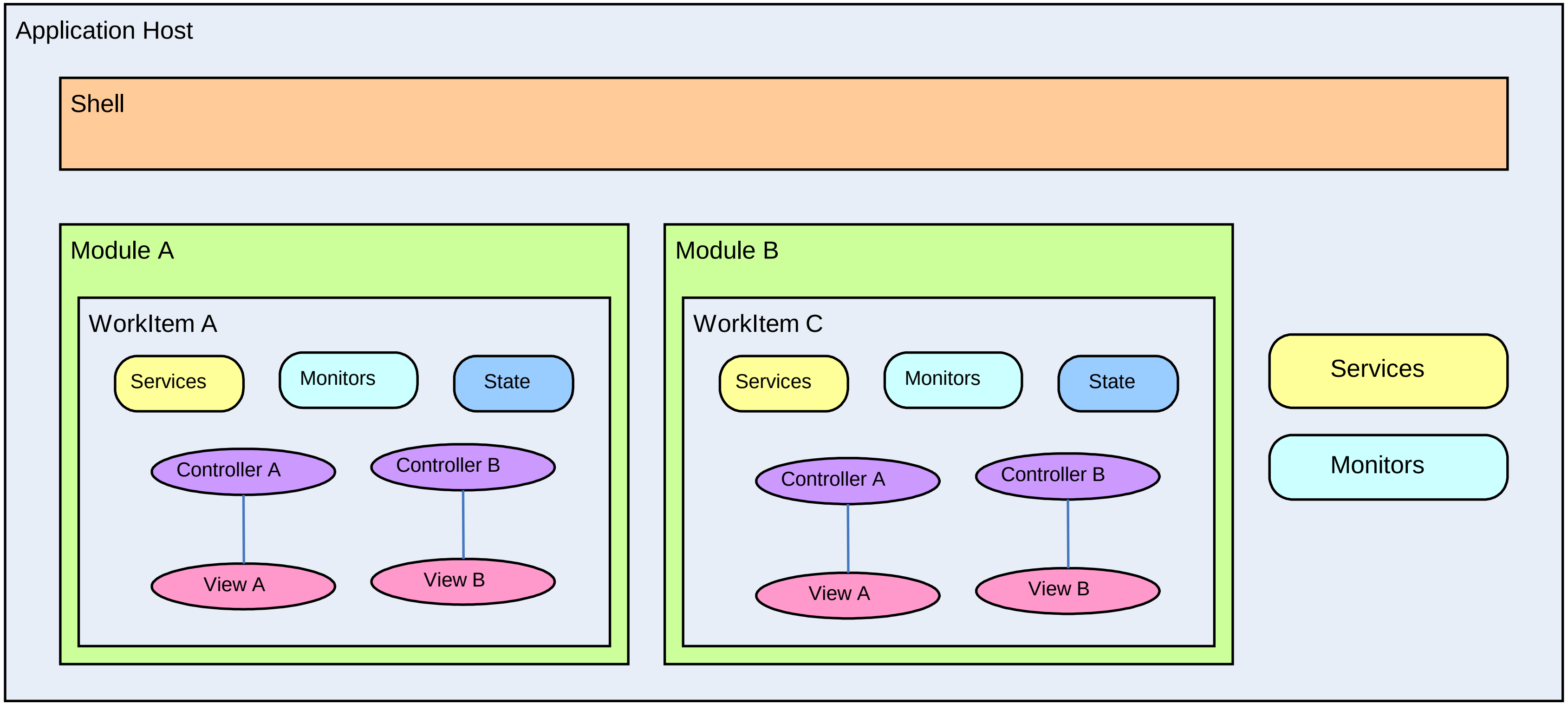
- Isolated, reusable functionality
- Loosely coupled teams
- Role-based modules



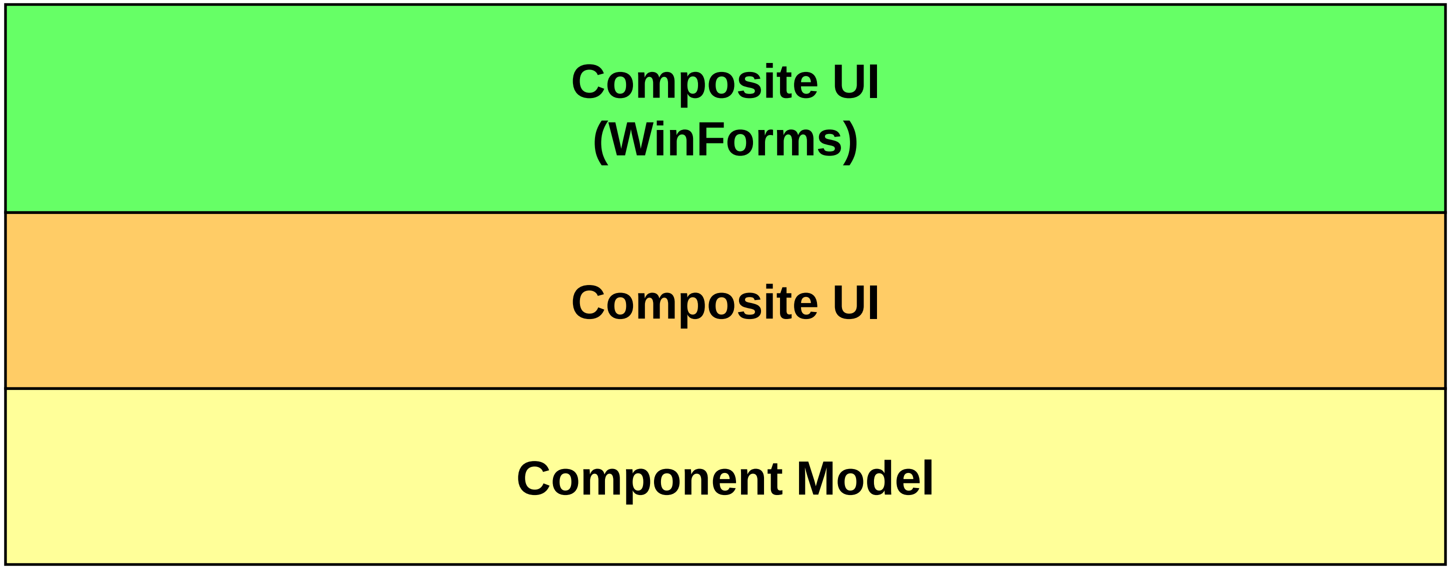
Demo

Modules

CAB Application Architecture



CAB Architecture

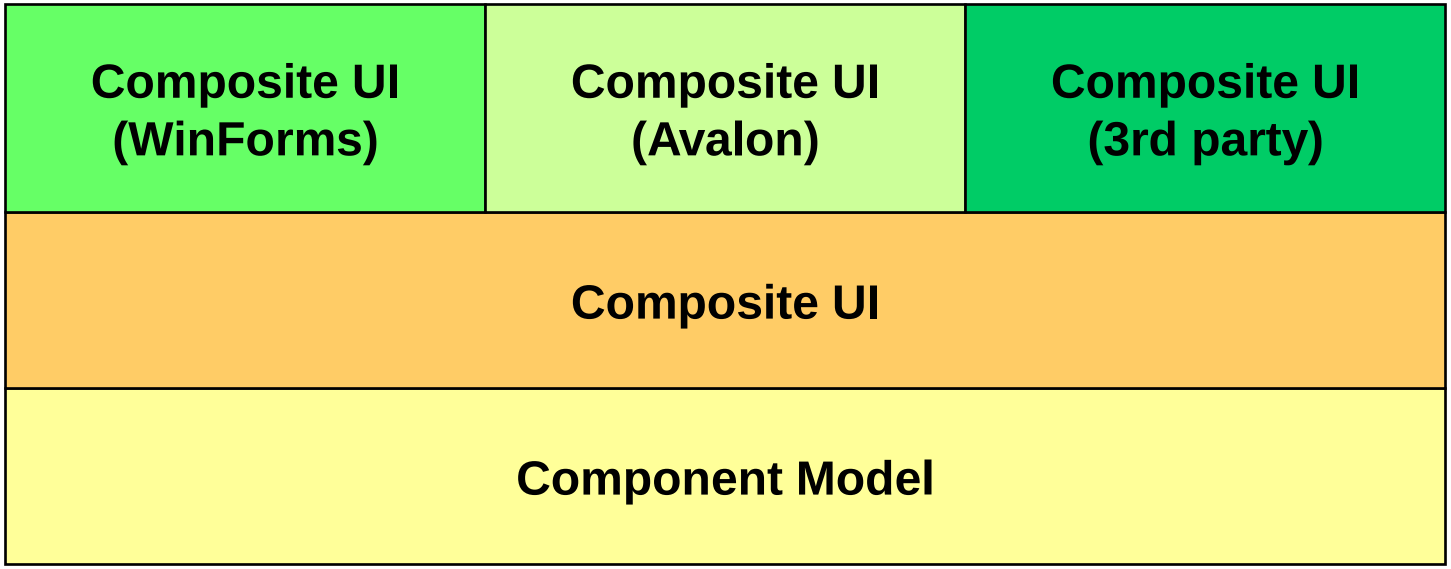


Composite UI
(WinForms)

Composite UI

Component Model

CAB Architecture



Composite UI (WinForms)

Composite UI (Avalon)

Composite UI (3rd party)

Composite UI

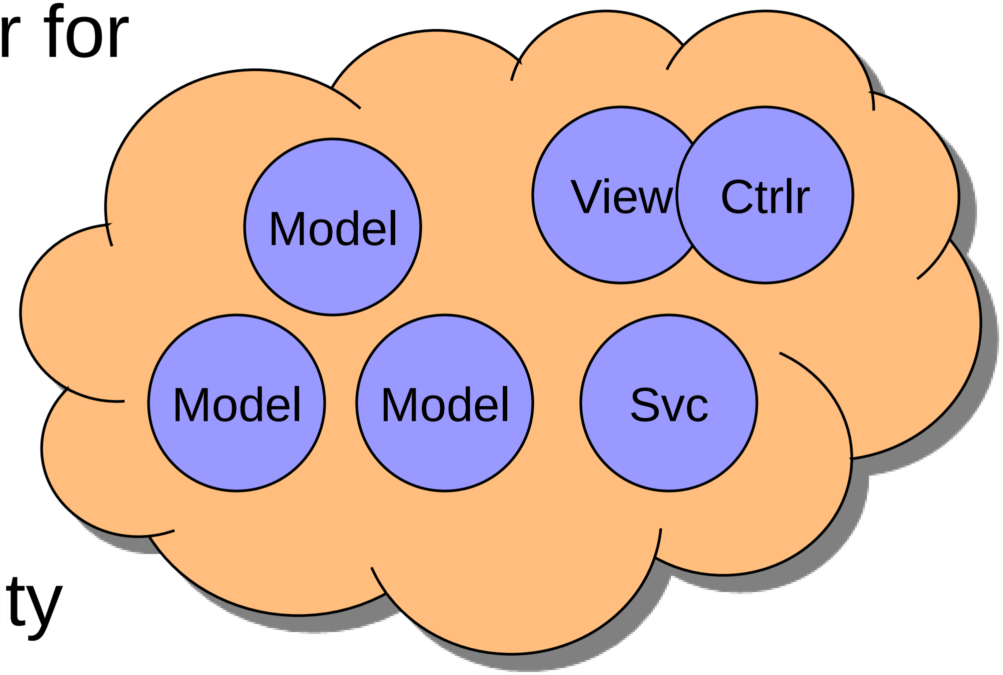
Component Model

Views & Controllers

- Views present model data to the user
- Controllers contain the business logic
- Automatically wired up by the container
- A view has one and only one controller
- A controller may control many views

Work Item

- Represents a use case in the system
- Specialized container for
  - Model Data
  - Views
  - Controllers
  - Workspaces
  - Services
- Key point of reusability



Workspaces

- Workspaces are canvases onto which you can paint your views
- For Windows Forms, we ship:
  - WindowWorkspace
  - MdiWorkspace
  - ZoneWorkspace
  - TabWorkspace
  - DeckWorkspace

Demo

Bank Teller QuickStart

Q & A

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