

IBM's UI UNITY

A Role Based, Device Independent, Administrative Console

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Ease of Use



Common Systems Administration



The "Opportunity"



Software Group

CSA: A Big Opportunity



Every Server (OS & Middleware) Offered Unique Admin:



*Enterprise
Servers*



*Function
Servers*



*Department
Servers*



Clients

- **Complex Administration of Heterogeneous Environments**
- **A Variety of Interfaces for Systems, Users and Services**
- **Reducing Skills Available for Systems Administration**



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For the Customer:

Varieties of Administrative Experience ...



- ▶ Increase the cost of ownership of IBM products
- ▶ Cause staffing and skill problems
- ▶ Create a confusing picture and perception of IBM products
 - Multiple administrative and management user interfaces to juggle
 - Multiple large learning curves (e.g., different task flows)
 - Duplicate data entry and common synchronization problems
 - Protracted and error-prone configuration
 - Silos of decentralized management (data and staff issues)
 - Staffing and organizational adjustments (skill groups, retention)
 - Erosion in the perception of IBM brands and "fog of IBM products" (nothing is the same, a jumbled experience)
 - Complicated PD and administrative inefficiencies
 - Slow adoption and implementation and growth curves
 - Unused product features (adopting a "bare minimum" approach)



Common Systems Administration



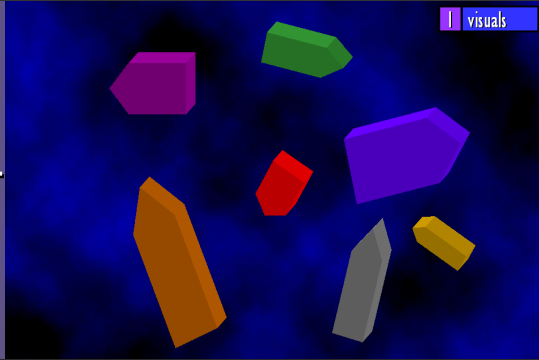
The Actions



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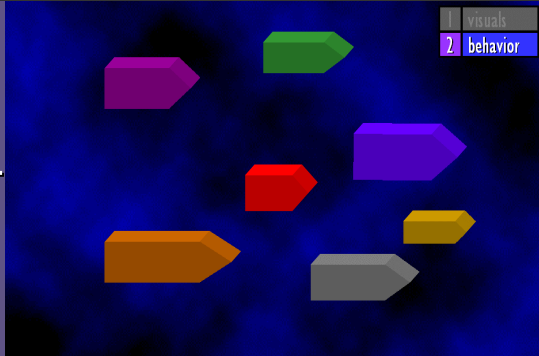
Pre-CSA Initiative - "Concepts"

Concept 1



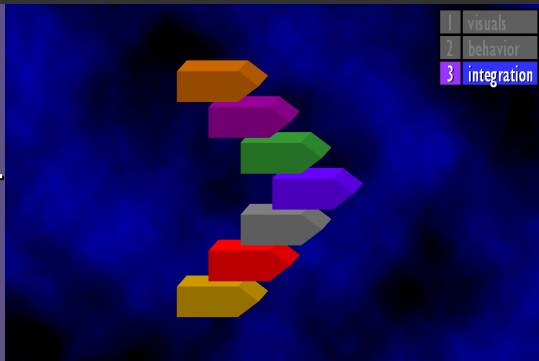
Visual cohesiveness
Task-directed interface design
Stable control surfaces

Concept 2



Robust Java components
Single point of access
Context assistance

Concept 3



Task/object integration
General administration
Integrated assistance
XML architecture

AUIML (UI - XML)

Device Independent UI Definitions: (Intent Oriented)

```
<CHOICE NAME="yes-no">  
  <CAPTION>Options available are:</CAPTION>  
  <STRING NAME="Affirmative">  
    <VALUE>Yes</VALUE>  
  </STRING>  
  <STRING NAME="Negative">  
    <VALUE>No</VALUE>  
  </STRING>  
</CHOICE>
```

AUIML Rendering Samples

Automatic Layout and Selection of Controls:

Questionnaire

Person Details

Title

First Name

Initial

Last Name *

Do you own a car ☐

Car Details

Do you want to see a car? ☐

Enter the year of registration

Number Plate (min-length=1,max=7) !

Questionnaire

Could you provide contact details ☒

Contact Information

Where do you live?

Do you have a phone ☒

Phone Number:

Availability from to

Appointment granted ☐

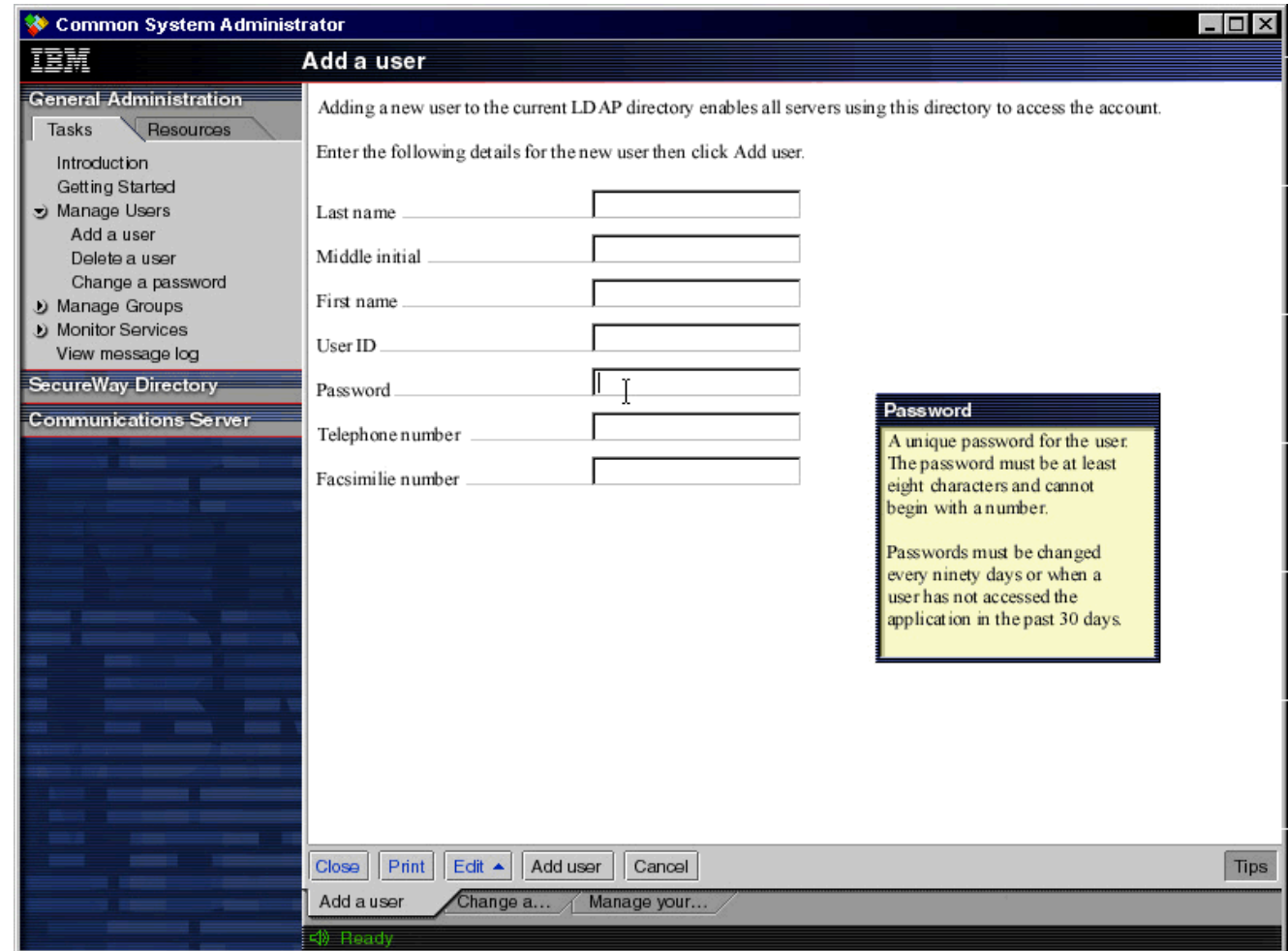
Common Systems Administration

Browser and Java "Concept" Console

Allowing
Integration of
Systems Admin
for Multiple
servers

Employing
Common Tasks
& Objects

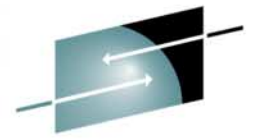
Through a
Device Neutral
Interface



The screenshot shows the 'Common System Administrator' window with the 'Add a user' tab selected. The left sidebar contains a tree view with 'General Administration' (Tasks, Resources), 'SecureWay Directory', and 'Communications Server'. The main area contains a form for adding a user with fields for Last name, Middle initial, First name, User ID, Password, Telephone number, and Facsimile number. A 'Password' tip box is visible on the right, stating: 'A unique password for the user. The password must be at least eight characters and cannot begin with a number. Passwords must be changed every ninety days or when a user has not accessed the application in the past 30 days.' The bottom of the window has buttons for 'Close', 'Print', 'Edit', 'Add user', and 'Cancel', along with a status bar showing 'Ready'.

i-Series PDML (UI - XML) 1999

Not intent oriented - Visual Builder for productivity



SHARE

Technology • Connections • Results

AS/400 Operations Navigator

File Edit View Options Help

0 minutes old

Primary Environment

- AS/400 Network
 - Systema**
 - Jobs
 - Messages
 - Multimedia
 - Printer Output
 - Printers
 - Systemb
 - Database
 - File Systems
 - Internet
 - Jobs
 - Messages
 - Multimedia
 - Network
 - Printer Output
 - Printers
 - System
 - Users and Groups

Systema:

Name	Description
Jobs	AS/400 Jobs
Messages	AS/400 Messages
Multimedia	AS/400 Multimedia Objects
Printer Output	AS/400 Printer Output
Printers	AS/400 Printers

1 - 5 of 5 object(s)

Converged on Joint Solution (Multi-Group, Multi-Division)



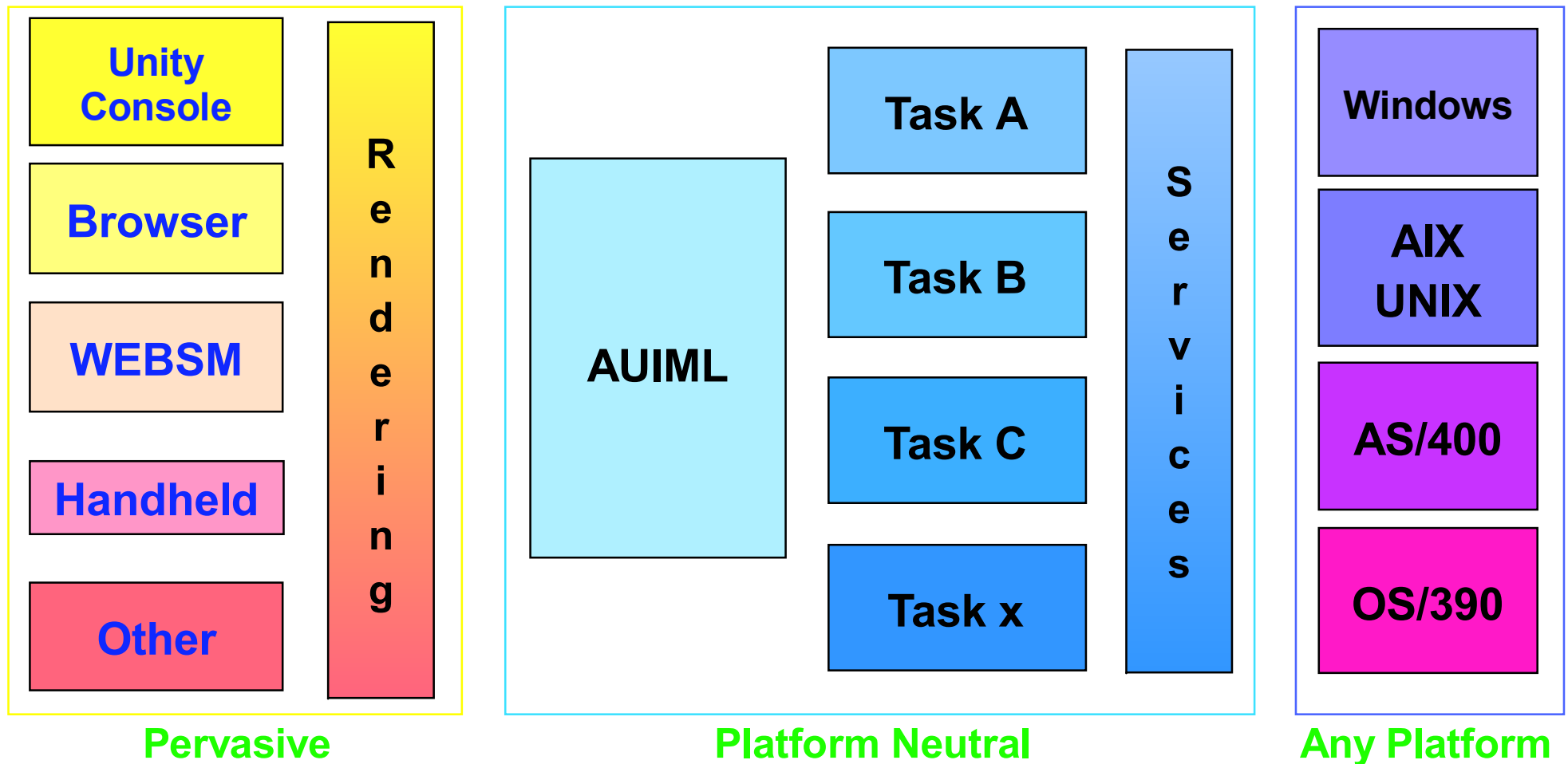
UNITY

- **Adopt single set of UI Guidelines**
- **Adopt AUIML**
 - ▶ **Intent oriented**
 - **Desktop, Browser, other device...**
- **Visual Builder**
 - ▶ **Productivity**
- **Joint Java Console (thick client) & Browser Console (thin client)**



Unity Vision

One User Experience for All Administration Tasks:



CSA Unity Objectives



■ **User Experience Objectives**

▶ **User**

- **Common Look and Feel - User Interface Architecture**
- **Integration of Tasks in Single Console**
- **Deployment on range of Device Classes**

▶ **Application Developer**

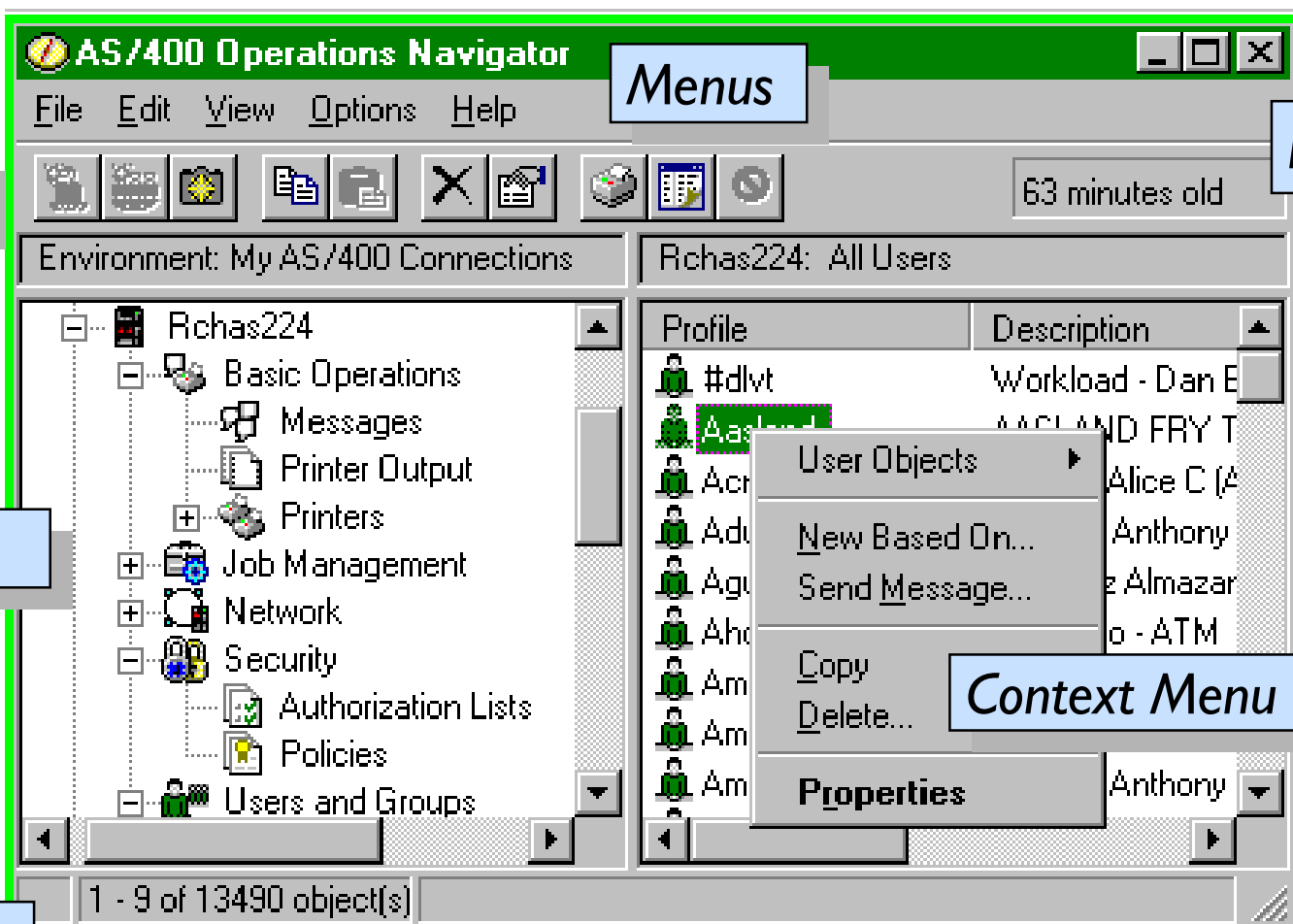
- **Intent based Tooling**
 - **Device Class & Interaction Independence**
 - **UIA Conformance & Productivity**

■



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Unity User Interface Elements

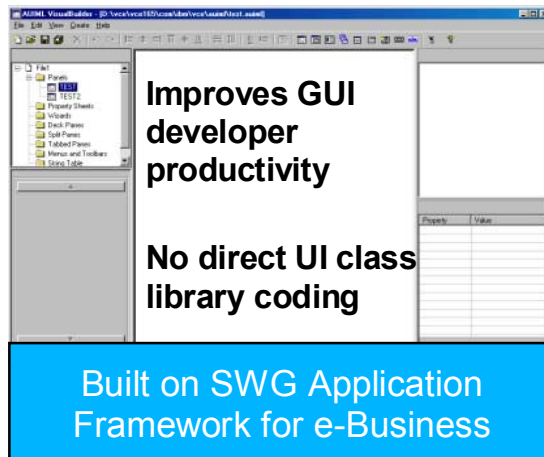


The screenshot shows the AS/400 Operations Navigator window. The interface is divided into several sections:

- Menu:** Located at the top, containing File, Edit, View, Options, and Help.
- Toolbar:** A row of icons for various operations, located below the menu.
- List Age:** A label indicating the age of the data, showing "63 minutes old".
- Tree:** A hierarchical view on the left showing the system structure, including Basic Operations, Messages, Printer Output, Printers, Job Management, Network, Security, Authorization Lists, Policies, and Users and Groups.
- List:** A table on the right displaying user information. The table has columns for Profile and Description. The first row shows "#dlvt" with the description "Workload - Dan E".
- Context Menu:** A menu that appears when a user is selected, containing options like User Objects, New Based On..., Send Message..., Copy, and Delete....
- Properties:** A section at the bottom right showing details for the selected user, "Anthony".
- Status:** A label at the bottom indicating the number of objects, showing "1 - 9 of 13490 object(s)".

CSA (Unity) Toolkit Components

AUIML Visual Builder



AUIML XML User Interface Language
(Open - platform independent, technology independent)

Common Renderer API

Pgm API

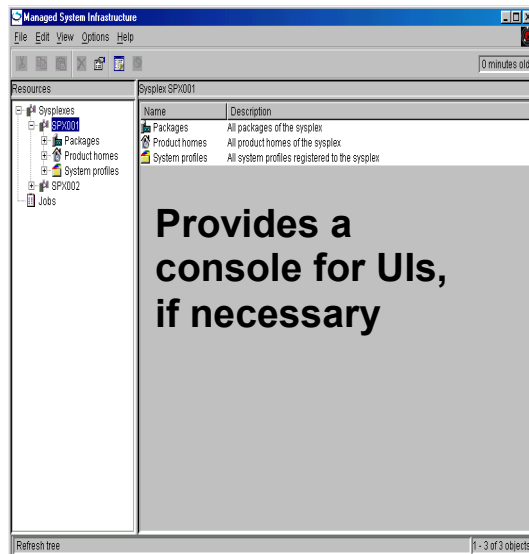
**Java
Renderer**

**HTML
Renderer**

**Palm
Renderer**

**Wireless
Renderer** ...

Console component (optional) (Java or HTML)



Title:

First Name:

Last Name:

Age:

Married:

☐ Yes ☐ No

Salary:

Do you smoke:

☐ Yes ☐ No

OK Cancel

Client Details

Title

First Name

Initial

Last Name

Age

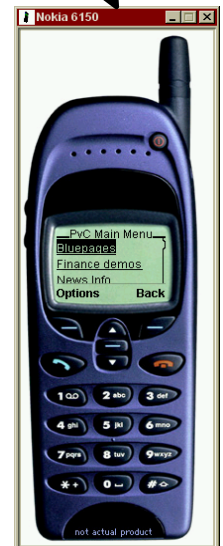
Sex

Married ☐ Yes ☐ No

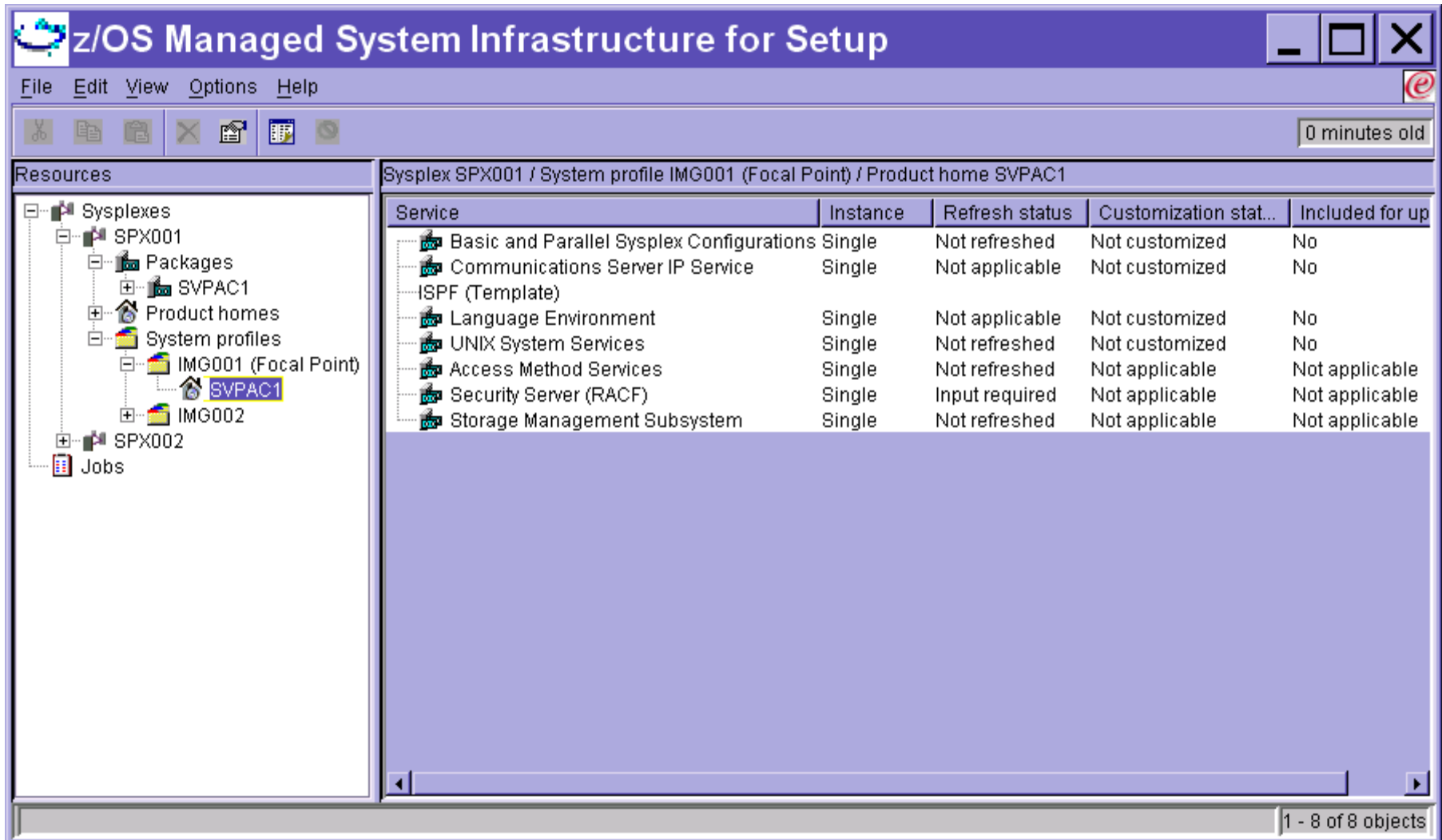
Salary

Do you Smoke ☐ Yes ☐ No

OK Reset



An Early 'Customer' - The msys Console



z/OS Managed System Infrastructure for Setup

File Edit View Options Help

0 minutes old

Resources

- Sysplexes
 - SPX001
 - Packages
 - SVPAC1
 - Product homes
 - System profiles
 - IMG001 (Focal Point)
 - SVPAC1
 - IMG002
 - SPX002
 - Jobs

Sysplex SPX001 / System profile IMG001 (Focal Point) / Product home SVPAC1

Service	Instance	Refresh status	Customization stat...	Included for up
Basic and Parallel Sysplex Configurations	Single	Not refreshed	Not customized	No
Communications Server IP Service	Single	Not applicable	Not customized	No
ISPF (Template)				
Language Environment	Single	Not applicable	Not customized	No
UNIX System Services	Single	Not refreshed	Not customized	No
Access Method Services	Single	Not refreshed	Not applicable	Not applicable
Security Server (RACF)	Single	Input required	Not applicable	Not applicable
Storage Management Subsystem	Single	Not refreshed	Not applicable	Not applicable

1 - 8 of 8 objects

CSA Tooling... Unity Offering

■ Delivered 2000

Concept 3

Intent rendering
Installed Java console
Browser console

AS/400 (OpsNav)

Non-intent rendering
Visual builder
PDML
Installed Java console

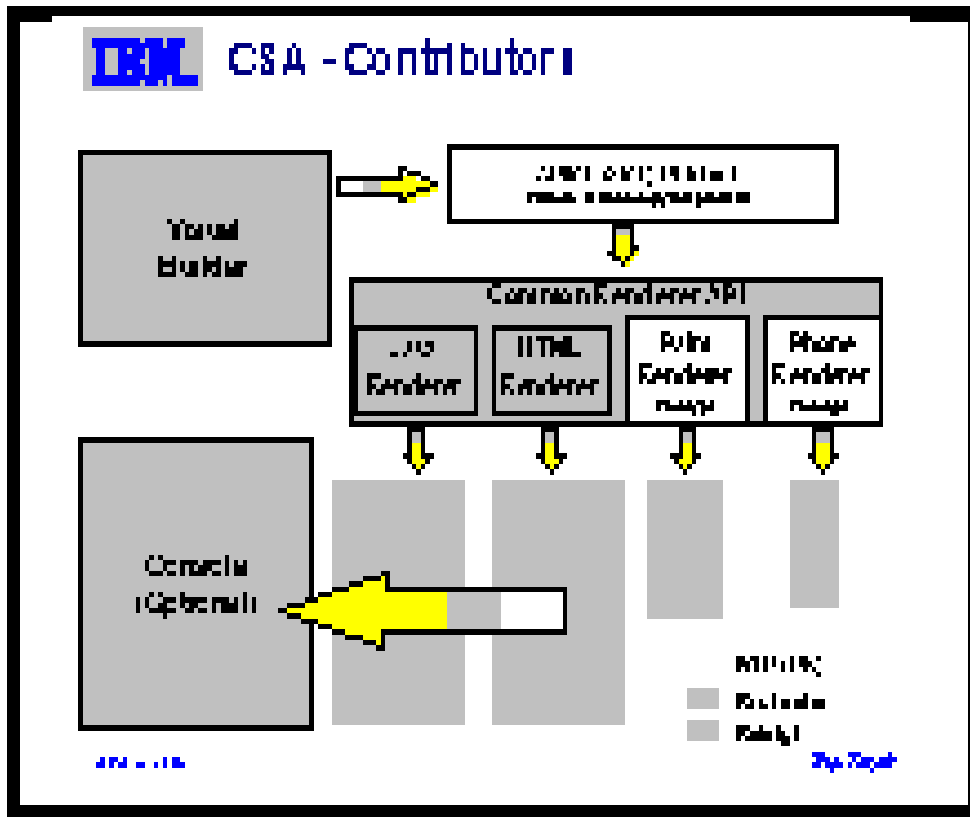
CSA (Unity)

Converged XML
Renderer neutral API
Visual builder
PDML migration path
Browser console
Java console

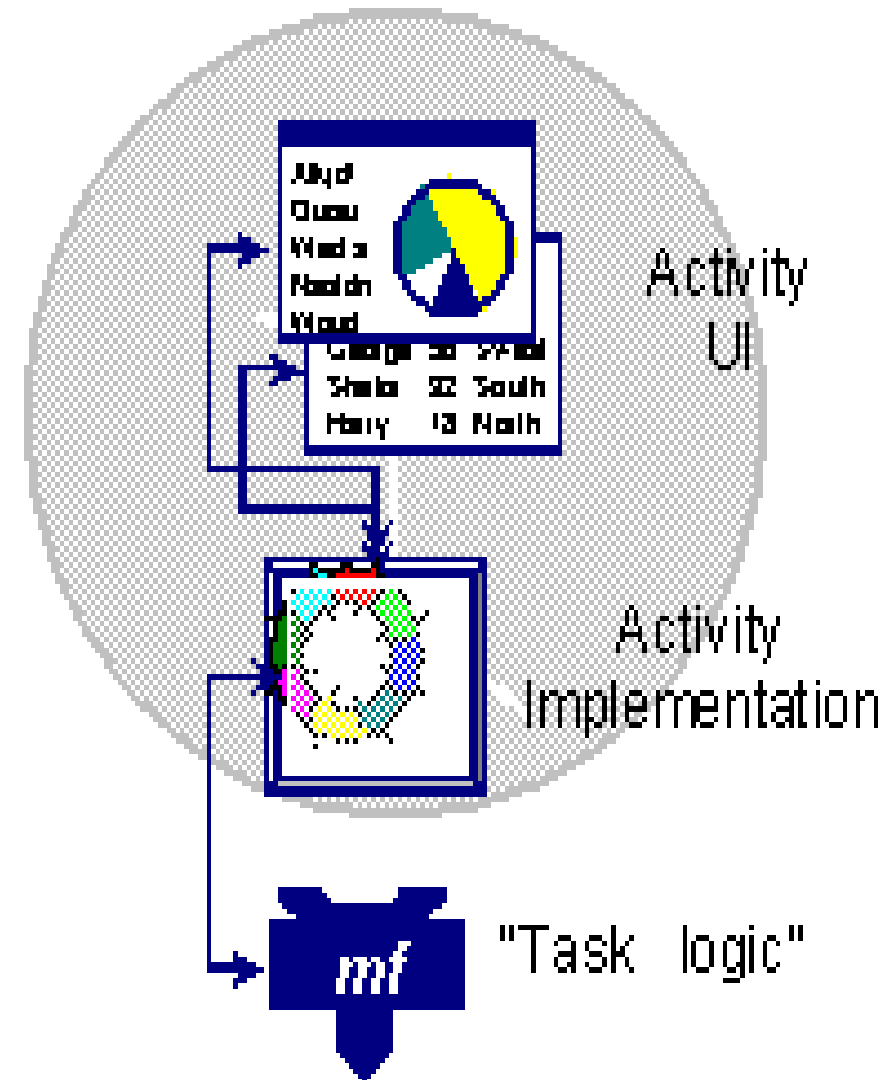
CSA - Next Step

- UI standardization
- Common UI componentry
- Visual builder
- Foundation for the next step

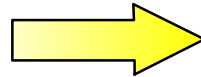
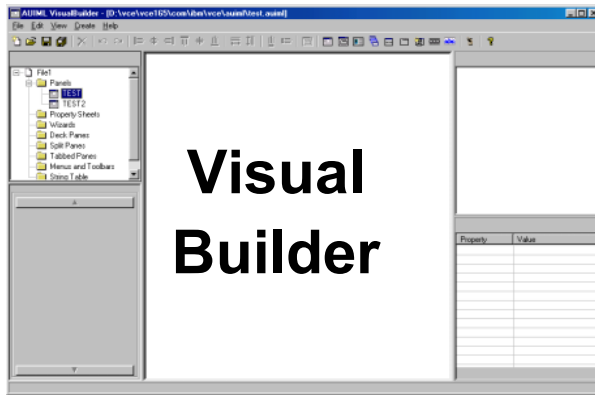
UNITY & Tivoli Integration



- Common UI Guidelines
- Tivoli PS Consoles (Roles Based)
- Joint Toolkit 11/2001



2001 Components



AUIML (XML) UI Intent
Platform & technology independent



Renderers

Java

HTML

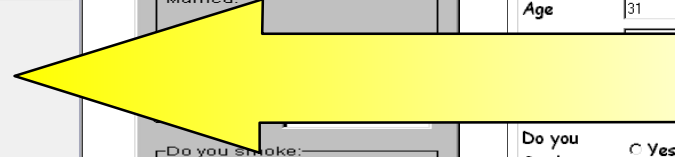
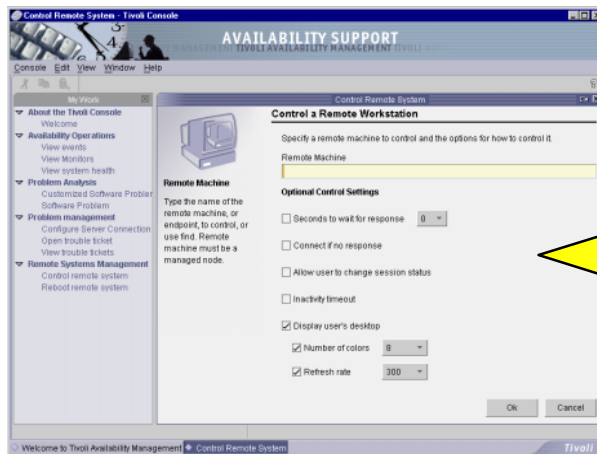
Palm
(Prototype)

Phone
(Prototype)

Choice of Interaction Logic

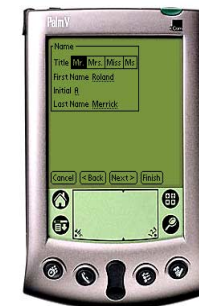
Beans

Script



Form titled 'Title:' with input fields for 'First Name:', 'Last Name:', 'Age:', and 'Married:' (radio buttons for Yes/No). Buttons: OK, Cancel.

Form titled 'Client Details' with input fields for 'Title' (dropdown), 'First Name', 'Initial', 'Last Name', 'Age', and 'Do you Smoke' (radio buttons for Yes/No). Buttons: OK, Reset.



Common Systems Administration

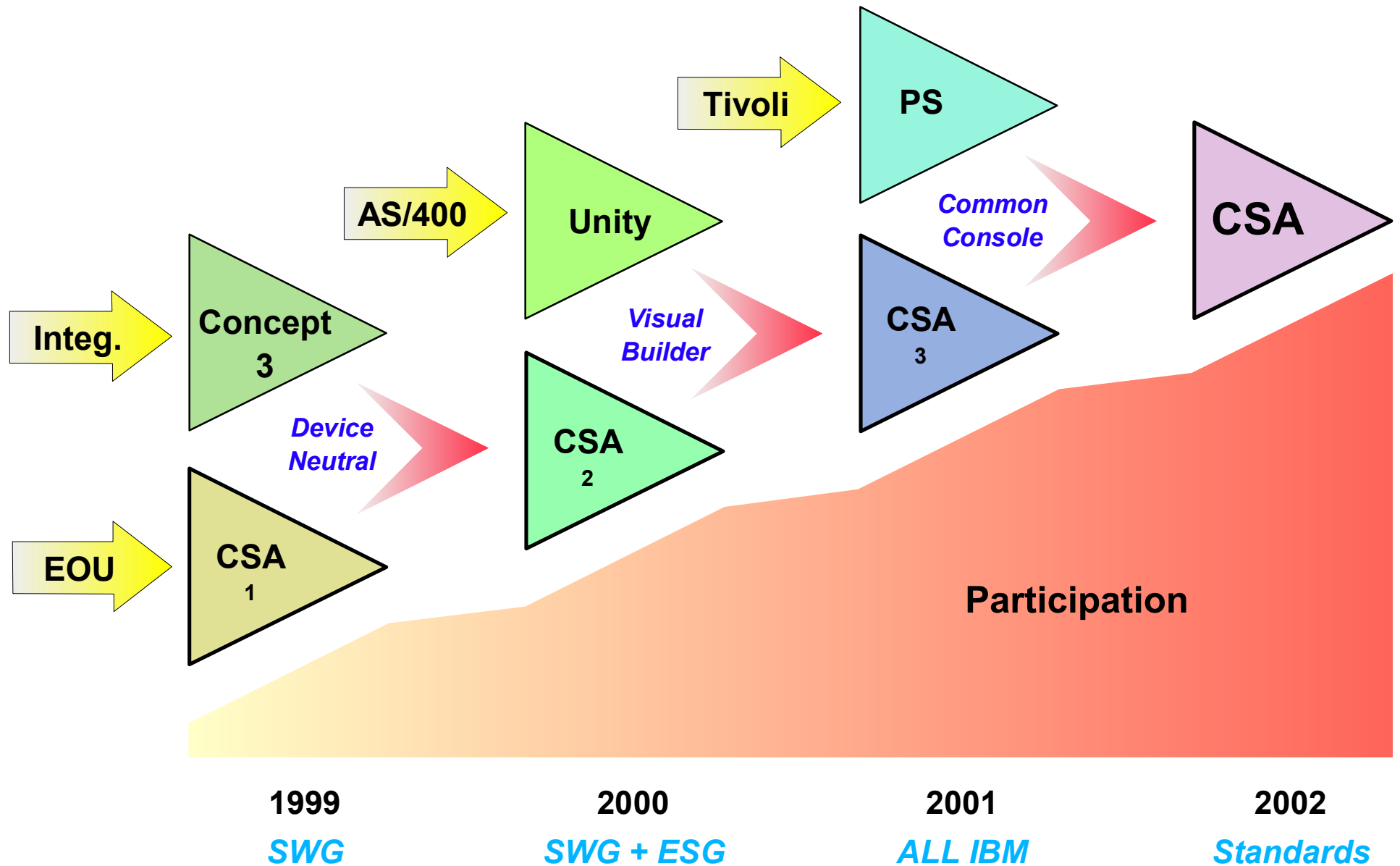


The Next Steps



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Continuing CSA Evolution



Which Standards?

- **Three relevant major standards**
 - ▶ **J2EE Programming and Execution Environment (as in Websphere)**
 - ▶ **WSIA (Web Services for Interactive Applications) Component model**
 - ▶ **XForms**

XForms - Small Step for AUIMLers

- **Initial Intent -**
 - ▶ **Propose AUIML to W3C Device Independence Working Group as a Standard**
- **Instead -**
 - ▶ **Amalgamated proposal with other IBM groups**
 - ▶ **Jointly worked closely with W3C on XForms**
 - **Ensuring AUIML "Intent Oriented" concepts incorporated into XForms**
 - **Syntax changes**
- **XForms published as Draft Standard**
- **XForms is the natural path from AUIML**

WSIA & CCI

(Web Services for Interactive Applications &
Common Console Interface)

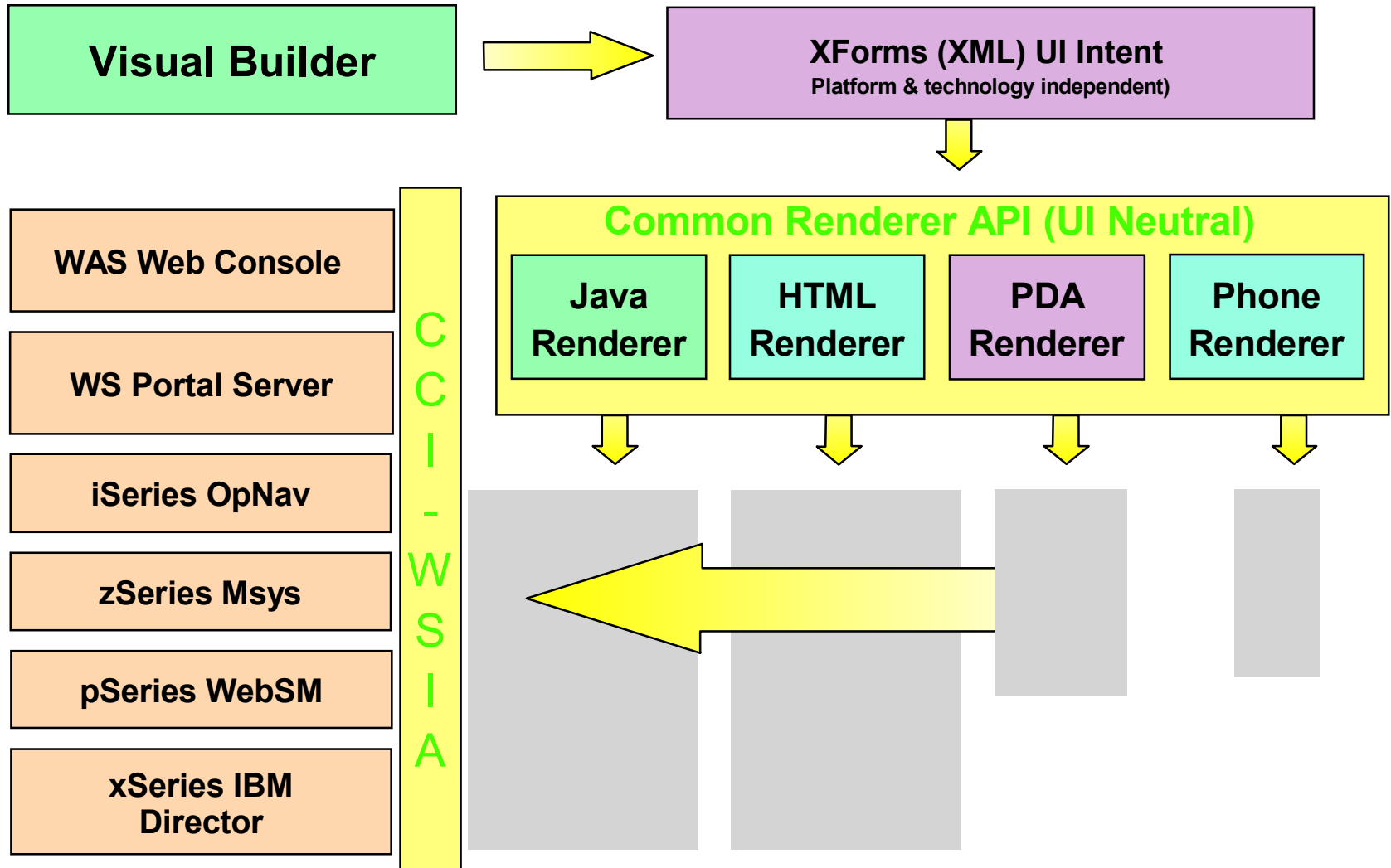


- **Support for migration from existing consoles**
 - ▶ OpsNav, WebSM, Msys, IBM Director, Tivoli PS ...
 - ▶ **EXTREMELY LARGE** number of tasks implemented with pre-CSA Tooling
 - ▶ CCI will be supported by each console to allow new tasks to coexist
 - ▶ Non-disruptive migration/coexistence of those tasks with new tasks over time
 - ▶ New tasks able to run in all consoles & Device Classes
- **Lower development cost, User learns task once, not once per console**
- **Based on industry standards / emerging standards**
 - ▶ Web Services for Interactive Applications (WSIA) component model
 - ▶ Where relevant, uses J2EE Service interfaces
- **Implemented in CSA Tooling**



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CSA Console Vision



- **What makes up a console?**
 - Various console UI components
 - User assistance
 - Solution branding
 - Console install
 - Dynamic task definition, installation & deployment
 - Task activation (servlet, JSP, FU, etc.)
 - Security
 - Role-based task filtering
 - User preference persistence
 - Tracing & logging
 - Session mgmt
 - Connection pooling
 - Directory service
 - Tasks to administer all of the above
- **Most of above services provided by J2EE Environment - Others by WSIA & XForms**
- **Avoids duplication**
- **Avoids non-Standards based activities**

So... UI UNITY

Offering From Any Client:



*Enterprise
Servers*



*Function
Servers*



*Department
Servers*



Clients

- **Simplified Administration of Heterogeneous Environments**
- **Seamless Administration of Systems, Users and Services**
- **Support for Reducing Skills Available for Systems Administration**