IBM's UI UNITY

A Role Based, Device Independent, Administrative Console

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Ease of Use
The "Opportunity"
CSA: A Big Opportunity

Every Server (OS & Middleware) Offered Unique Admin:

- Complex Administration of Heterogeneous Environments
- A Variety of Interfaces for Systems, Users and Services
- Reducing Skills Available for Systems Administration
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
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
Device Independent UI Definitions: (Intent Oriented)

```xml
<CHOICE NAME="yes-no">
  <CAPTION>Options available are:</CAPTION>
  <STRING NAME="Affirmative">
    <VALUE>Yes</VALUE>
  </STRING>
  <STRING NAME="Negative">
    <VALUE>No</VALUE>
  </STRING>
</CHOICE>
```
Automatic Layout and Selection of Controls:

- **Person Details**
  - Title: Mr.
  - First Name: Roland
  - Initial: A
  - Last Name: Merrick

- **Do you own a car?**
  - Yes

- **Car Details**
  - Do you want to see a car? No
  - Enter the year of registration: 1,995.
  - Number Plate (min-length=1, max=7)

- **Contact Information**
  - Could you provide contact details: Yes
  - Where do you live? France
  - Do you have a phone? Yes
  - Phone Number: 0.0.
  - Availability from: 0. to 0.

- **Appointment granted**
  - No
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
i-Series PDML (UI - XML) 1999
Not intent oriented - Visual Builder for productivity
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:

Unity Console
Browser
WEBSM
Handheld
Other

Pervasive
Rendering

AUIML

Task A
Task B
Task C
Task x

Platform Neutral
Services

Windows
AIX UNIX
AS/400
OS/390

Any Platform
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
Unity User Interface Elements

- Toolbar
- Tree
- Status
- Menus
- List Age
- List
- Context Menu
CSA (Unity) Toolkit Components

AUIML Visual Builder

- Improves GUI developer productivity
- No direct UI class library coding
- Built on SWG Application Framework for e-Business

AUIML XML User Interface Language

(Open - platform independent, technology independent)

Common Renderer API

- Java Renderer
- HTML Renderer
- Palm Renderer
- Wireless Renderer

Console component (optional)

(Java or HTML)

Provides a console for UIs, if necessary

Console component

Provides a console for UIs, if necessary
An Early 'Customer' - The msys Console
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
Choice of Interaction Logic

- Beans
- Script

Renderers

- Java
- HTML
- Palm (Prototype)
- Phone (Prototype)

AUIML (XML) UI Intent
Platform & technology independent

2001 Components

Visual Builder

Client Details

Title: [Box]
First Name: [Box]
Initial: [Box]
Last Name: [Box]
Gender: [Box]
Married: [Box]
Age: [Box]
Do you smoke: [Box]

Do you drink: [Box]

OK
Cancel
Common Systems Administration

The Next Steps
Continuing CSA Evolution

1999
SWG

2000
SWG + ESG

2001
ALL IBM

2002
Standards

CSA Evolution:
- Concept 3
- AS/400
- Unity
- CSA 2
- CSA 3
- Tivoli
- PS
- CSA
- Common Console
- Participation
- Integ.
- EOU
- Device Neutral
- Visual Builder
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
CSA Console Vision

Visual Builder

- WAS Web Console
- WS Portal Server
- iSeries OpNav
- zSeries Msy
- pSeries WebSM
- xSeries IBM Director

Common Renderer API (UI Neutral)

- Java Renderer
- HTML Renderer
- PDA Renderer
- Phone Renderer

XForms (XML) UI Intent
Platform & technology independent
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
Offering From Any Client:

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