



A Global Software Leader for NonStop
Providing Enterprise Connectivity Solutions

www.crystalpoint.com

Strategic Partner - HP NonStop Division



Founded 1986 **OutsideView™**
Leading Desktop-to-NonStop
Connectivity software

- Corporate Standard for host connectivity
- Ships with every new console
- Data Transport Security (NSSL) Provider to NED

We Provide More Than Emulation

Multiple Solutions:

Host Connectivity

Data Transport Security

Application Modernization



OutsideView 7.3

Major Changes

- SSL for FTP (& Telnet)
- Seamless Guardian/OSS
- Text Editing Enhancements
- 3270E Enhanced Mode

SSL-secured FTP

- Easy to use, configure
- Wizard to import Server certificates to local PC
- Complements host-side SSL capability (NSSL)

FTP Settings

Connection Info
Host: s72k.crystalpoint.com Timeout: 60 sec
 Auto Reconnect Request passive mode Garner initial directory tree

User Information
 Anonymous Login
User: cp.jimh
Password: xxxxxx
Account:

Display Mode
 Dialog Command-Line

Download - Edit File Extension
 Use .txt Use last character of filename

Initial Directories
Local Dir: [] Clear Set Current
Remote Dir: [] Clear Set Current

Use Secure FTP

Server Security/Certificate Options
 Validate certificate against browser certificate store
 Validate root CA fingerprint []
 Allow user override of errors to permit connection

OK Cancel Help

Seamless OSS/Guardian

- Navigates across Guardian and OSS File systems
- Supports UNIX Sub-Mode within 6530 Emulation
 - Via TERMINFO or TERMCAP file
- Transparently Use Editors and Utilities

The screenshot shows the OutsideView application window titled "OutsideView - Ent-Standard-default* - [s72k-clear]". The interface includes a menu bar (File, Edit, View, Session, Macro, Window, Help) and a toolbar with various icons. On the left, a "Sessions" pane shows two active sessions: "Tandem s72k-ssl" and "Tandem s72k-clear". The main window displays a directory listing for "\$D00.NSSL" with the following data:

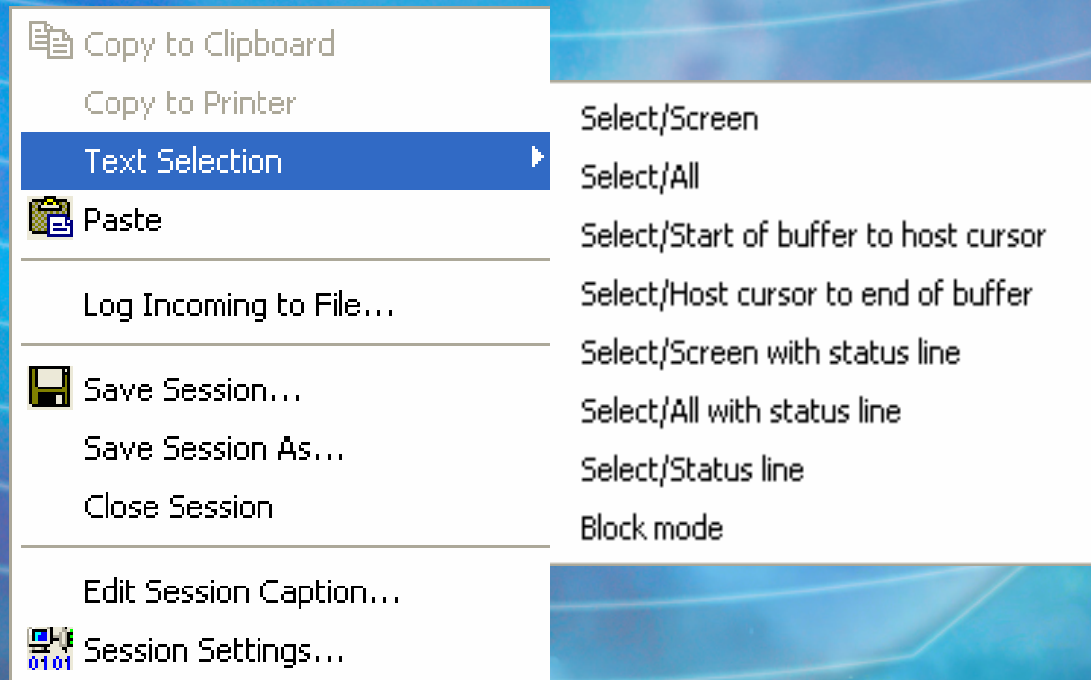
	CODE	EOF	LAST	MODIFIED	OWNER	RWEP	PE _{xt}	SE _{xt}
CACERT	0	796	02JUN2006	10:56	255,255	NUNU	4	28
CLNTCERT	0	496	01JUN2006	17:25	255,255	NUNU	4	28
CLNTKEY	0	389	01JUN2006	17:25	255,255	NUNU	4	28
EXTCERT	0	650	02JUN2006	10:56	255,255	NUNU	4	28
EXTREY	0	677	02JUN2006	10:56	255,255	NUNU	4	28
HTTPZIP	0	3288727	01JUN2006	17:25	255,255	NUNU	4	28
INTCERT	0	653	02JUN2006	10:56	255,255	NUNU	4	28
INTKEY	0	677	02JUN2006	10:56	255,255	NUNU	4	28
LICENSE	0	188	02JUN2006	10:52	255,255	NUNU	4	28
NSSL	0 700	10585188	01JUN2006	17:26	255,255	NUNU	500	500
NSSLCOM	100	16384	01JUN2006	17:26	255,255	NUNU	4	28
NSSLI	800	9506504	01JUN2006	17:27	255,255	NUNU	20	100
NSSLINS	100	8204394	02JUN2006	10:52	255,255	NUNU	4	28
OCACERT	0	769	01JUN2006	17:25	255,255	NUNU	4	28
OSERVCR	0	630	01JUN2006	17:27	255,255	NUNU	4	28
OSERVKEY	0	677	01JUN2006	17:27	255,255	NUNU	4	28
README	101	30194	01JUN2006	17:27	255,255	NUNU	4	28
SHOWLOG	700	29232	01JUN2006	17:27	255,255	NUNU	16	28
SHOWLOGI	800	31968	01JUN2006	17:27	255,255	NUNU	20	100
SSSLCONF	101	540	01JUN2006	17:27	255,255	NUNU	2	2

The status bar at the bottom indicates "Socket connected to host" and provides navigation options: Tandem, Telnet, TCP/IP, CLEAR.

Enhanced Text Selection Function

- Copy
- Paste
- Log

NEW!



3270E Enhanced Mode

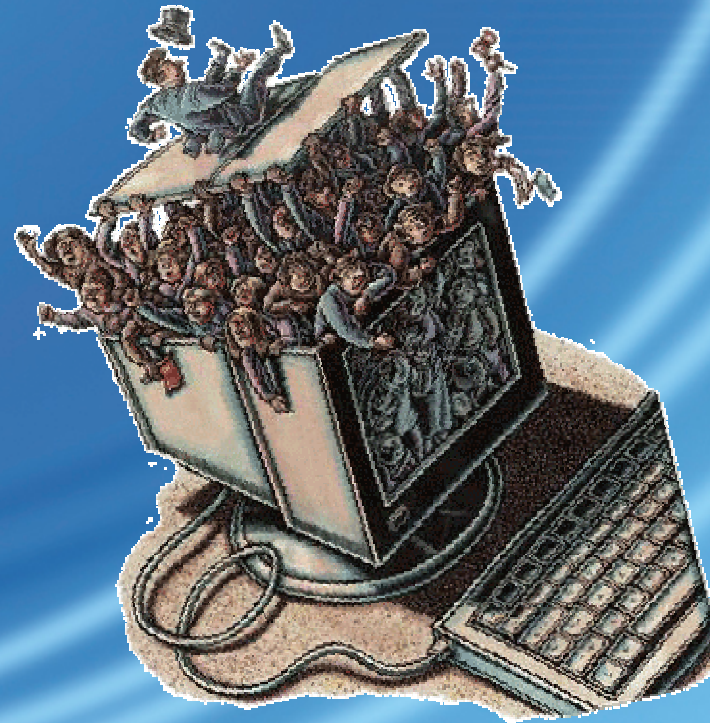
- Widely used in IBM systems
- Strengthens OutsideView as corporate standard for terminal emulation

TN3270 |

Model	Telnet Term Type
<input checked="" type="radio"/> Model 2	<input checked="" type="radio"/> 3278
<input type="radio"/> Model 3	<input type="radio"/> 3279
<input type="radio"/> Model 4	<input checked="" type="checkbox"/> Enhanced Terminal
<input type="radio"/> Model 5	

OutsideView Enterprise Mode

**One-To-Many
Administration**



Centralized Administration

Designed for Large or Complex Environments

- Profiles
- Permissions
- Citrix
- License Pools
- Configurations
- Roaming Users
- Win Terminal Servers
- Auto-Update

OutsideView

Multiple Licensing Models

- **Standard Desktop**
- **Enterprise:**
 - Per Seat
 - Concurrent
(Automatic License Check-In)
 - ü License vs. User Tracking

Automated Licensing Administration

Concurrent

- Automatic License Release when OutsideView Exits
- Install Unlimited Number of Workstations
- Usage “throttled” Through Number of Available Licenses
- Citrix/WinTerm Support

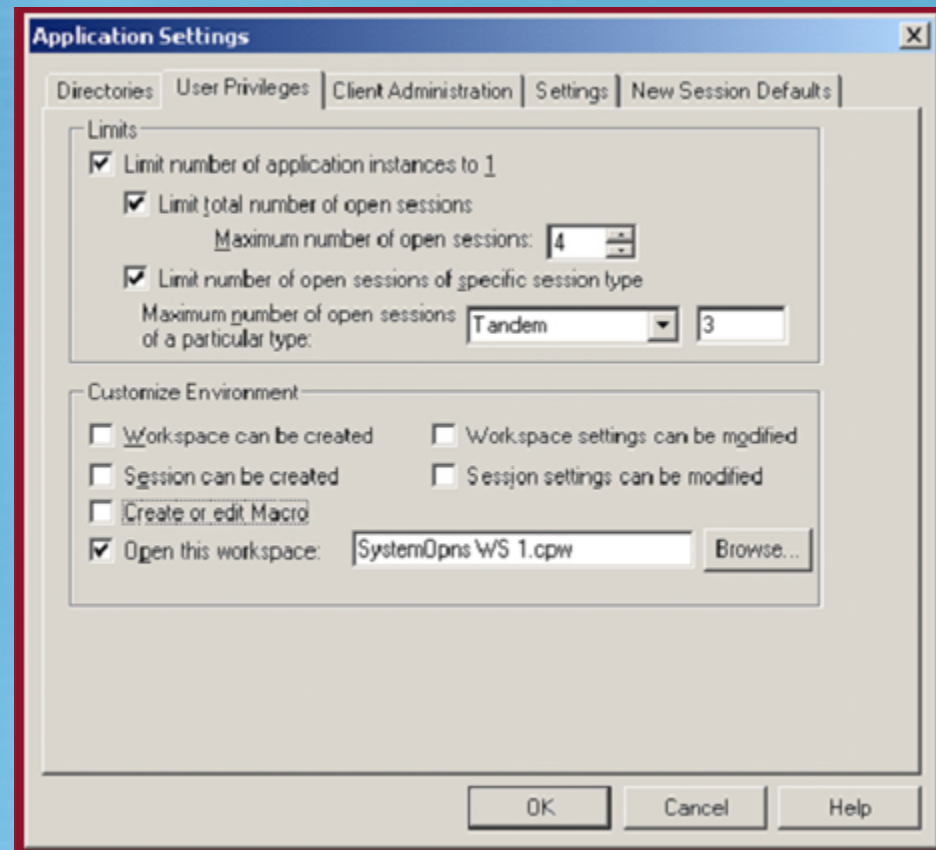
OutsideView Enterprise

- LicenseView Concurrent License Pool

License Number	User ID	In Use	Last Logged In	Last Logged Out
730100015415		0		
730100015516		0	1/10/2006 8:42:24 AM	1/10/2006 9:16:22 AM
730100015617		0		
730100015718		0	1/11/2006 11:26:24 AM	1/11/2006 11:28:20 AM
730100015819		0		
730100015920		0		

Network Based

Centralized Dynamic
User Permission Sets
(per profile)



With SSL-secured communications, plus centralized control over user privileges and configurations, OutsideView Enterprise provides a complete operational solution

- Sture Larssen, EDS (Saab)

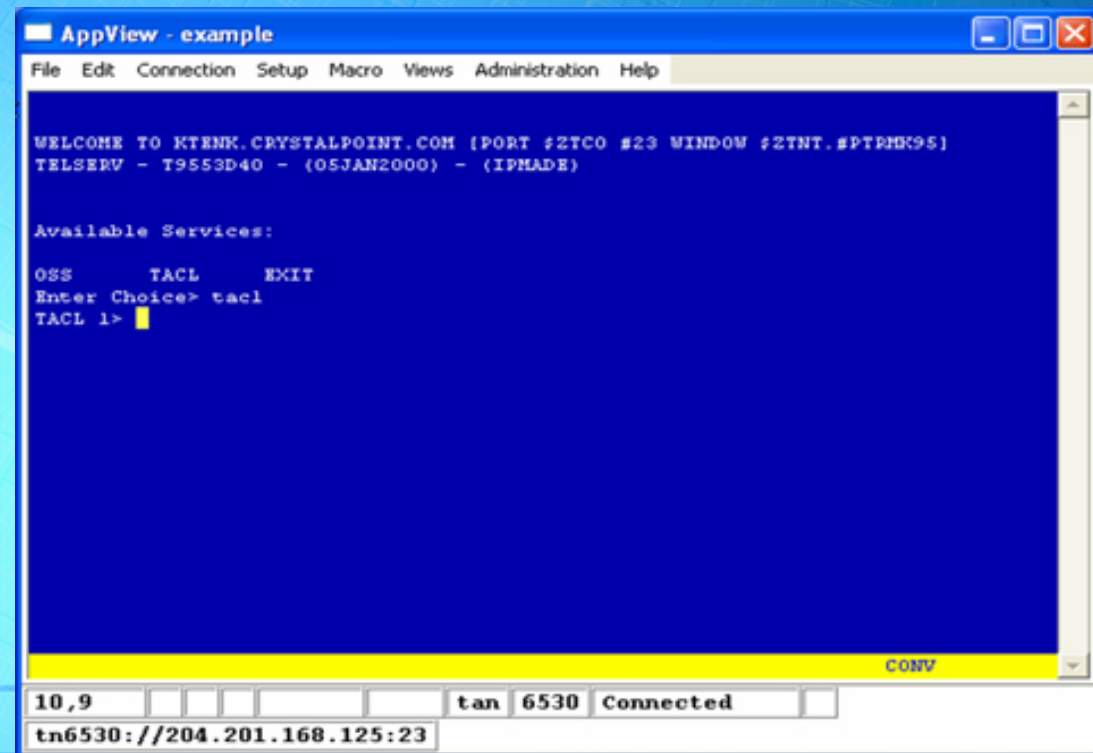
OutsideView WEB

“Green Screen”
Goes Internet



More Accessible Emulation

- **Multiple Types**
 - NonStop 6530
 - IBM 5250
 - IBM 3270
 - DEC VT



The screenshot shows a web browser window titled "AppView - example". The browser's address bar contains "tn6530://204.201.168.125:23". The main content area displays a terminal window with a blue background and white text. The terminal text reads: "WELCOME TO KTEMK.CRYSTALPOINT.COM [PORT #ZTCO #23 WINDOW #ZTNT.#PTRMK95] TELSERV - T9553D40 - (05JAN2000) - (IPMADE)", followed by "Available Services:" and a list of options: "OSS TACL EXIT". The user has entered "tacl" at the "Enter Choice>" prompt, and the terminal now shows "TACL 1>". A yellow status bar at the bottom of the terminal window displays "CONV". Below the terminal window, a status bar shows "10,9" in a box, "tan 6530 Connected" in a box, and "tn6530://204.201.168.125:23" in a box.

New! Release 1.3

Major Features

- **End-to-End Encryption**
 - HTTPS (SSL) to Web Server
 - Web Server to Host Via Tunneling
 - Multiple Tunneling Protocols; SSL, SSH2, Telnet
- **Seamless OSS/Guardian**
 - Automatic Environment Recognition via TermCap and TermInfo
- **Log to File / Log to Printer**

Data Transport Security

Def. **end-to-end encryption**

Continuous protection of the confidentiality and integrity of transmitted information by encrypting it at the origin and decrypting at its destination.

NSSL Product Suite

1. Secure Telnet
2. Secure FTP
3. Middleware
4. Expand
5. MQ-Series

NSSL Product Suite

- Server program for the NonStop Guardian environment
- SSL encryption for various communications protocols
- Products can be installed and implemented in common

Server Authentication

- Provided via the public key infrastructure (PKI) standard

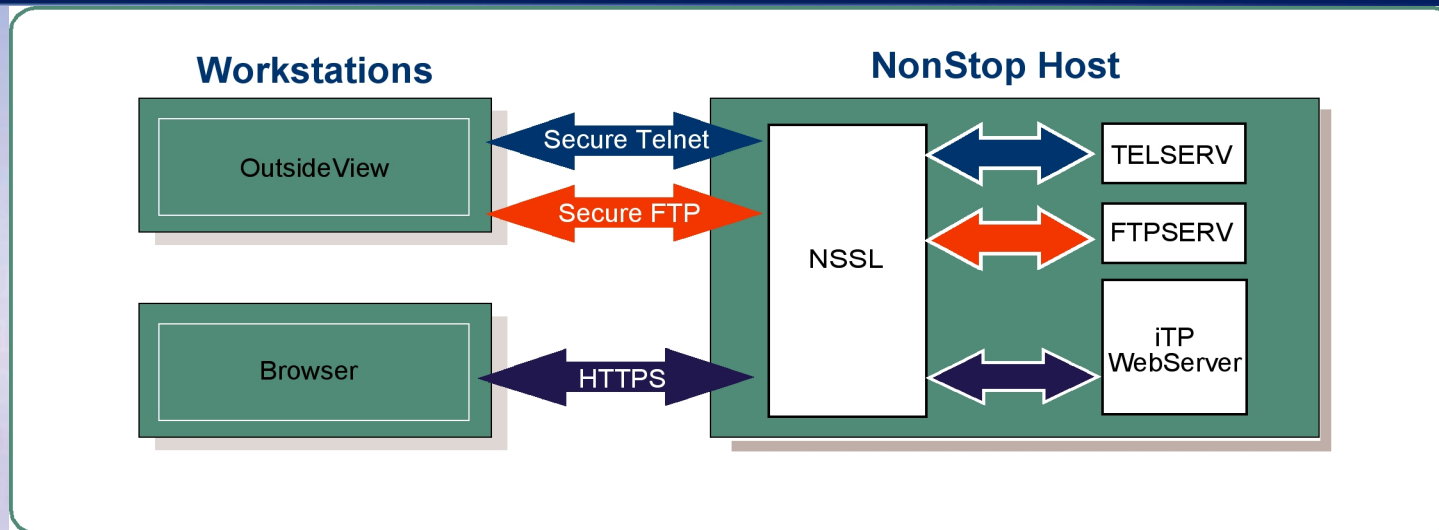
Server Certificates

- Signed by trusted third-party certificate authorities (e.g. Verisign®)

Tools

- Included lightweight HTTP server process
- Create both server and certificate authority (CA) certificates

NSSL Functional Diagram



- One or more instances of NSSL, in various modes, accept SSL data on designated port
- Data is decrypted and forwarded to the target socket, using defined protocol. Process is reversed, out bound

NSSL System Requirements

HP NonStop host

- D.45 or later
- Qualified on Integrity NonStop systems

Secure Telnet sessions

- OutsideView 7.2+
- Or any SSL 3.0 or TLS 1.0 compliant telnet client

Browser HTTP access

- HTTP 1.0 compliant browser

Secure FTP sessions

- OutsideView 7.3+
- Or any RFC-2228 compliant FTP client or server.

Cipher Suites Supported

Cipher Suite Support		
	OutsideView	NSSL NonStop SSL
MD5 Digest Only	✓	
SHA Digest Only	✓	
RC2 40-bit with MD5 Digest	✓	
DES 40-bit with SHA Digest	✓	
DES 128-bit with SHA Digest	✓	
RC4 40-bit with MD5 Digest	✓	
RC4 128-bit with MD5 Digest	✓	✓
RC4 128-bit with SHA Digest	✓	✓
Triple-DES with SHA Digest	✓	✓
AES 128-bit with SHA Digest	✓	✓
AES 256-bit with SHA Digest	✓	✓

NonStop Secure SHell (NSSH)

- **NSSH_FTP**: Secure file transfer to/from other platforms using SFTP and FTP port forwarding
- **NSSH_SecurSH**: Enables remote SSH clients to execute commands (OSS or TACL) on the NonStop. Provides an SSH client for the NonStop server; providing command execution and full shell access to an SSH-enabled remote system.
- **NSSH_PseudoTerminal**: Pseudo terminal support (including OSS) for running full screen terminal applications such as VI or EMACS

Application Modernization

Maximizing the Value of Your Legacy System



Legacy Dilemma

- *Perceived as Primitive*
- Expensive to Maintain
- Need for Wider User Access
- High Cost – Effort - Risk to Replace

Legacy Dilemma

- **Proven, Time-tested Solutions**
- **Supporting the Core Enterprise**
- **Capture 75% of World's Data**
- **Huge Intellectual and Financial Asset**

Legacy Dilemma Options

Remain

- Easiest Option
- Short Term

Rewrite

- Reduced Leverage
- Difficult Business Case

Renew

- Leverages Investment
- Intermediate Term

Replace

- Packaged Solution
- Often “Good Enough” at Best

AppViewXS provides technology to upgrade and modernize legacy applications without having to rewrite (or reprogram) in order to take advantage of current technologies.

Capabilities

Web-Enable

Secure

Transform

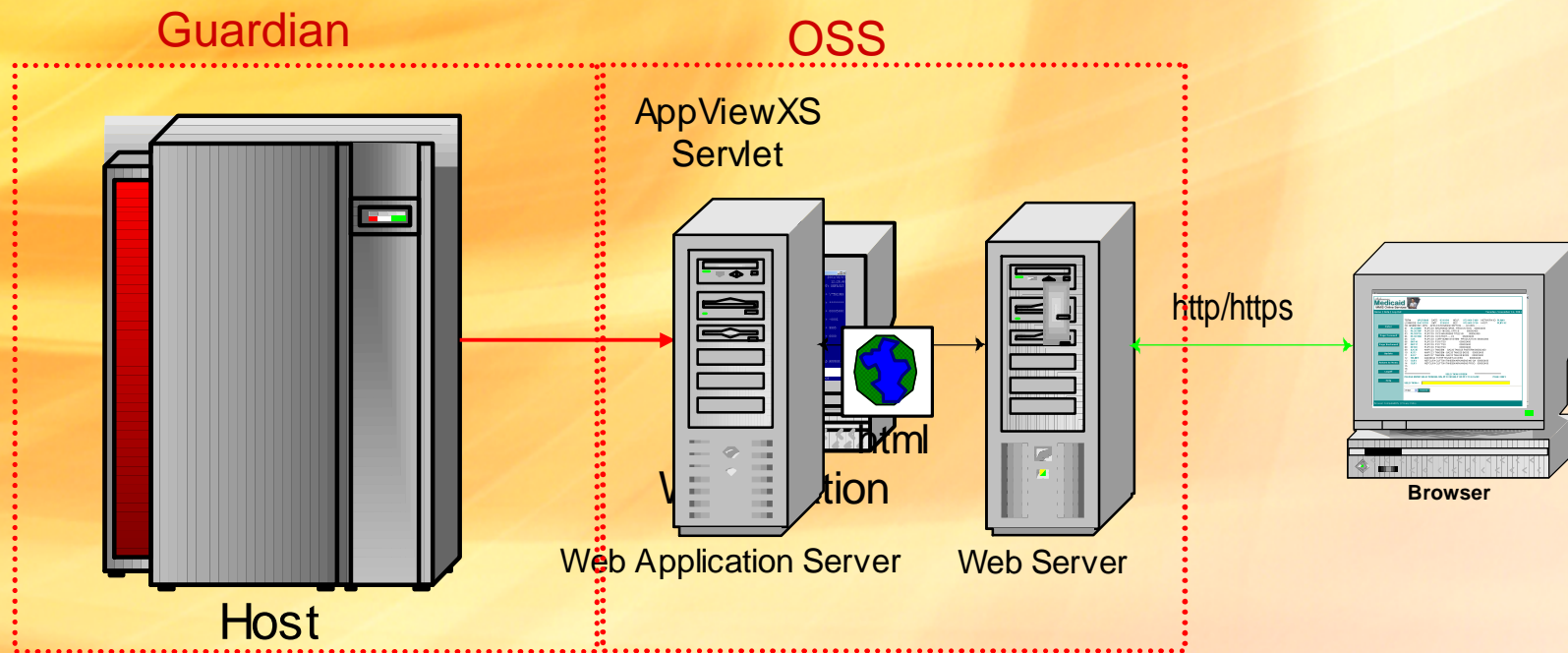
Extend

Integrate

AppViewXS Web-Enabling

- **Middleware Abstraction Layer**
- **Acts on Data Stream ‘Downstream’**
- **Transparent to Host, Application**
- **Patented On-the-fly Transformation to GUI**
- **Global HTML Template**

AppViewXS Web-Enabling Architecture



Architectural Advantages

Highly Deployable

- **No Host Code Changes**
- **Standard (Secure) Java Portal**
- **Thin-client (Browser-based) Access**
- **Qualified on Multiple Web Platforms**
- **Rapid Implementation**

Capabilities

Web-Enable

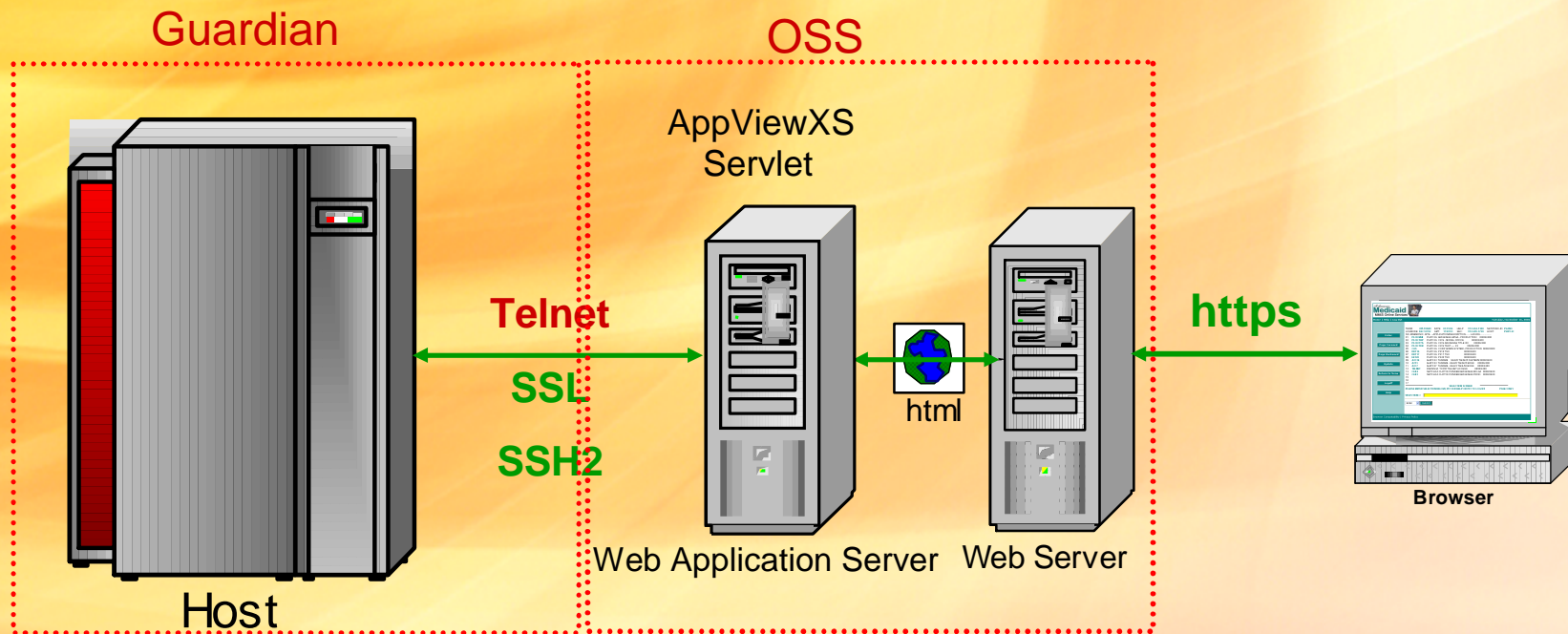
Secure

Transform

Extend

Integrate

End-to-End Secure



Capabilities

Web-Enable

Secure

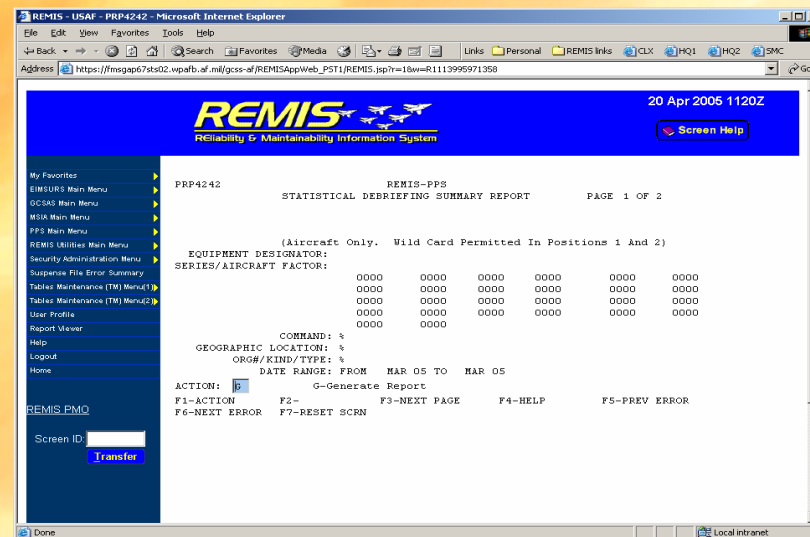
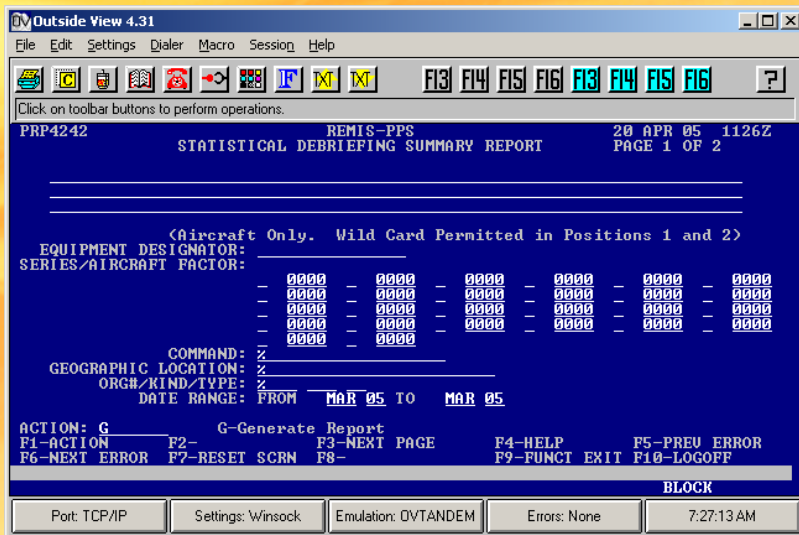
Transform

Extend

Integrate

Transform

Patented technology - Automatic GUI Transformation - Global HTML 'Template'



Capabilities

Web-Enable

Secure

Transform

Extend

Integrate

Extend

- **Create “Smart” Screens**
 - Graphical, Drag-and-Drop Studio
 - No Programming Required
 - Editable HTML
- **“Smart” Screens for Host Screens**
- **“Smart” Screens as Processing Layer**

KLGLGOM1 ----- Clemson University -----
Date: 10/06/05 Entry Validation System: Z001
Time: 17:50:12 Device: ADM1M465

----- Actions Options Help -----

KLSVSEL1

For PUBLIC Select sessi
If you ex establish an

Descripti

Clemson U
Universit

LUI
Books
Instit
using

ENTER USE
Enter F1

Command ==>
Enter F1=He

To con

LL UU UU IIIIII SSSSS
LL UU UU II SS SS

LUIS - Catalog
Introduction

Welcome to Clemson University's Library Catalog

You may begin a search from any screen.

SEARCH OPTIONS:	SEARCH EXAMPLES:
KEYWORD (k=)	k=south carolina and hurricane?
AUTHOR (a=)	a=conroy pat
TITLE (t=)	t=water is wide
SUBJECT (s=)	s=hurricanes
CALL NUMBER (c=)	c=QL737.C27

For more information on searching, press <Enter>.

For library hours, type EXP HOURS and press <Enter>.

Remote Users: To exit, type STOP and press <Enter>.

----- + Page 1 of 2 -----

Enter search command
NEWS
----- <F8> FORWARD page -----

NEXT COMMAND:

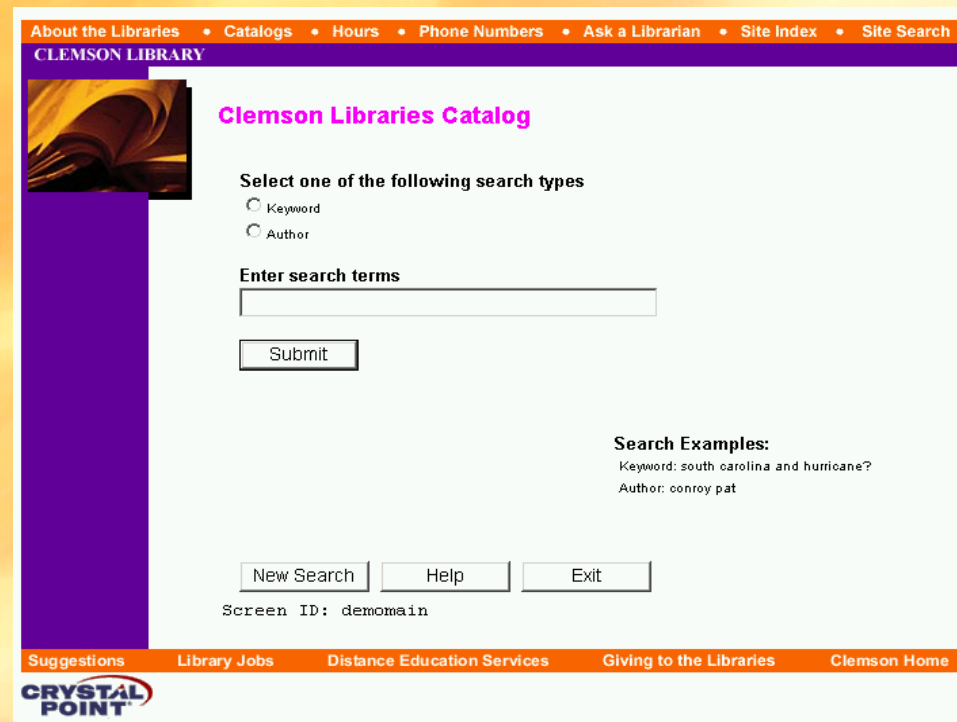
Example

Global Template

- HTML Screen Envelope
- Modifiable

Host Screens

- Embedded
- Modified
 - Get-to-the-Point
 - GUI objects



The screenshot displays a web application interface for the Clemson Libraries Catalog. At the top, a navigation bar includes links for 'About the Libraries', 'Catalogs', 'Hours', 'Phone Numbers', 'Ask a Librarian', 'Site Index', and 'Site Search'. Below this, the page title is 'CLEMSON LIBRARY'. A purple sidebar on the left contains a decorative image. The main content area features the heading 'Clemson Libraries Catalog' and a section for search options: 'Select one of the following search types' with radio buttons for 'Keyword' and 'Author'. Below this is a text input field labeled 'Enter search terms' and a 'Submit' button. To the right, 'Search Examples:' are provided: 'Keyword: south carolina and hurricane?' and 'Author: conroy pat'. At the bottom of the main area are buttons for 'New Search', 'Help', and 'Exit', along with the text 'Screen ID: demomain'. A footer bar contains links for 'Suggestions', 'Library Jobs', 'Distance Education Services', 'Giving to the Libraries', and 'Clemson Home'. The Crystal Point logo is visible in the bottom left corner of the screenshot.

Smart Screen Development

hp
invent

Enter

Enter

Logon

Refresh

Exit Swordfish

EDUCATION INFORMATION and RESERVATION SYSTEM
LOGON and USER VERIFICATION

DATE: 3/11/24
TIME: 12:30:29

User ID:

User Password:

SWF01

SF14 --Recover Scr

BLOCK

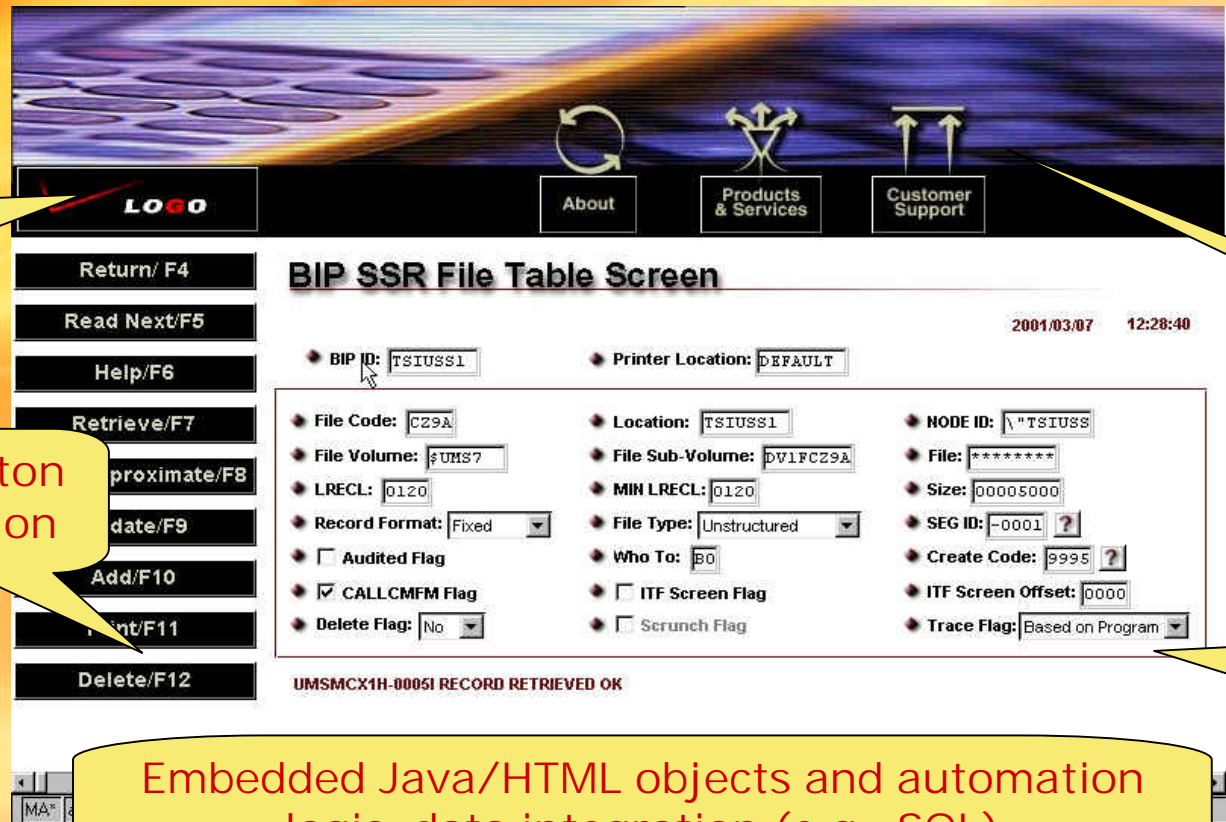
Enter ▾ Submit

F1 REFRESH PAGEUP PAGEDN ENTER EXIT

Screen ID: test1

AppV:

Extended Legacy Screen becomes a Smart Screen



Web Link

Graphics


Pushbutton Navigation

GUI Controls, Objects

Embedded Java/HTML objects and automation logic, data integration (e.g., SQL)

Example

Arkansas
Medicaid
MMIS Online Services



Home | Help | Log Out Tuesday, November 16, 2004

TELNET

ELECTRONIC DATA SYSTEMS CORPORATION DALLAS, TEXAS
Use of the network is restricted to authorized users. User activity is monitored and recorded by system personnel. Anyone using the Network expressly consents to such monitoring and recording. BE ADVISED: if possible criminal activity is detected, system records, along with certain personal information, may be provided to law enforcement officials.

LOGON-ID:	<input type="text"/>	NETWORK-ID:	PLAN01	DATE:	03/19/04
PASSWORD:	<input type="text"/>	HOST:	PLIPC4C	GMT:	17:49:44
NEW PASSWORD:	<input type="text"/>	TERMINAL-ID:	VPLT0A08	SECURITY:	972-605-3720
		CDRM:	MP3019	HELP:	972-604-5100

ENTER OPTIONAL INITIAL SELECTION BELOW, PF1 FOR HELP, OR 'LOGOFF'.

SELECTION=>

Enter

[Browser Compatability](#) | [Privacy Policy](#)

Extend

Studio modifies End-user Presentation

- **Substitute GUI objects for Host fields**
(Buttons, Drop-down lists, etc.)
- **Integrate Web technology**
(Calendaring Objects, Class file, Java Scripts)
- **Access Web Services**
(Address Validation Service, Class file, Java Scripts)
- **Modify Workflow**
(Get-to-the-Point, Screen transition logic)
- **Integrate Multiple Data Sources**
(SQL, Automated Background Host access)

Extend

External Calls

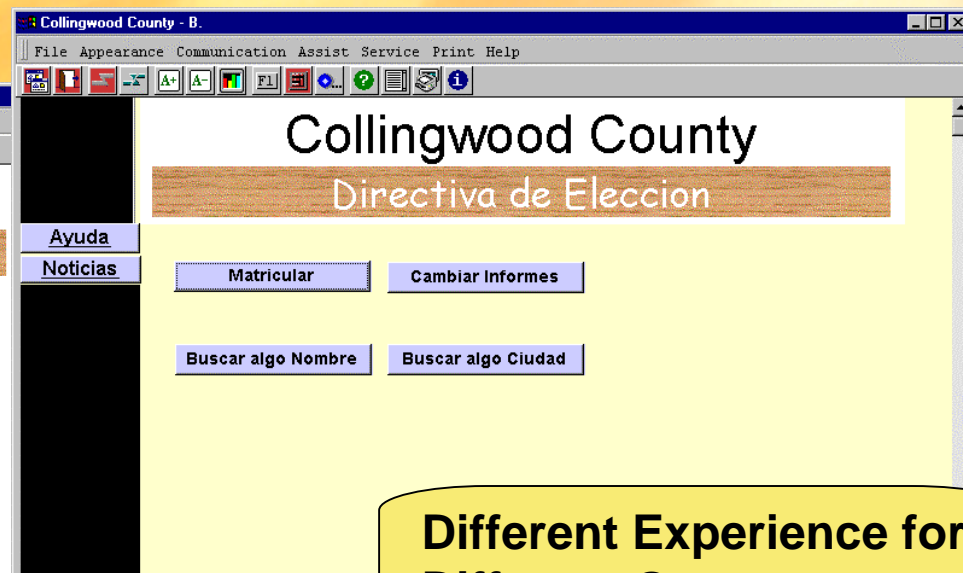
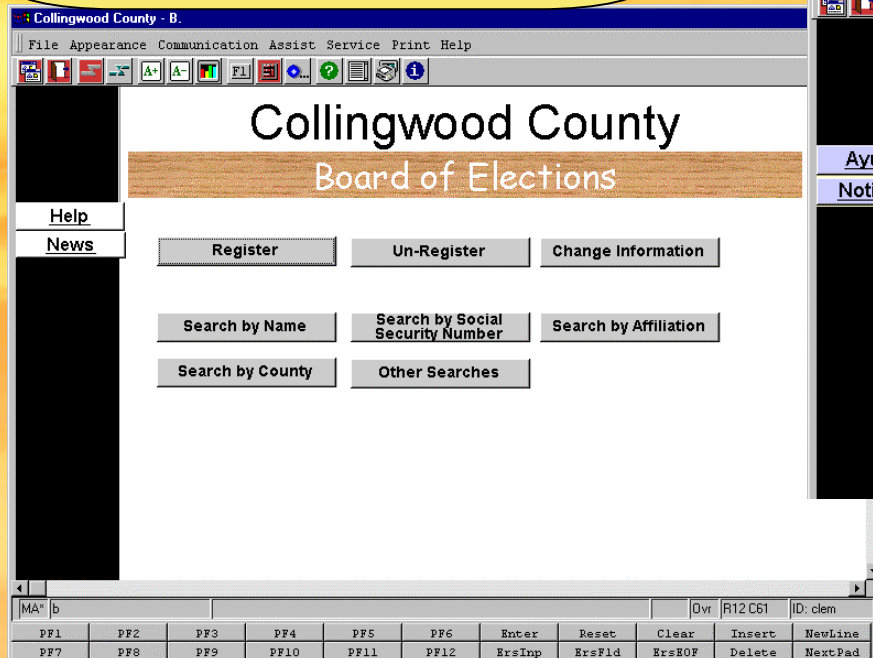
- Java Applet
- Class File
- HTML
- XML

Web Links

- Open any URL – Static or Dynamic
- GET or POST

And More.... Profiles

Customization Sets for
Specific User Groups



Different Experience for
Different Groups

Capabilities

Web-Enable

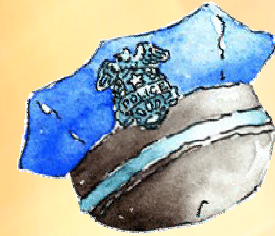
Secure

Transform

Extend

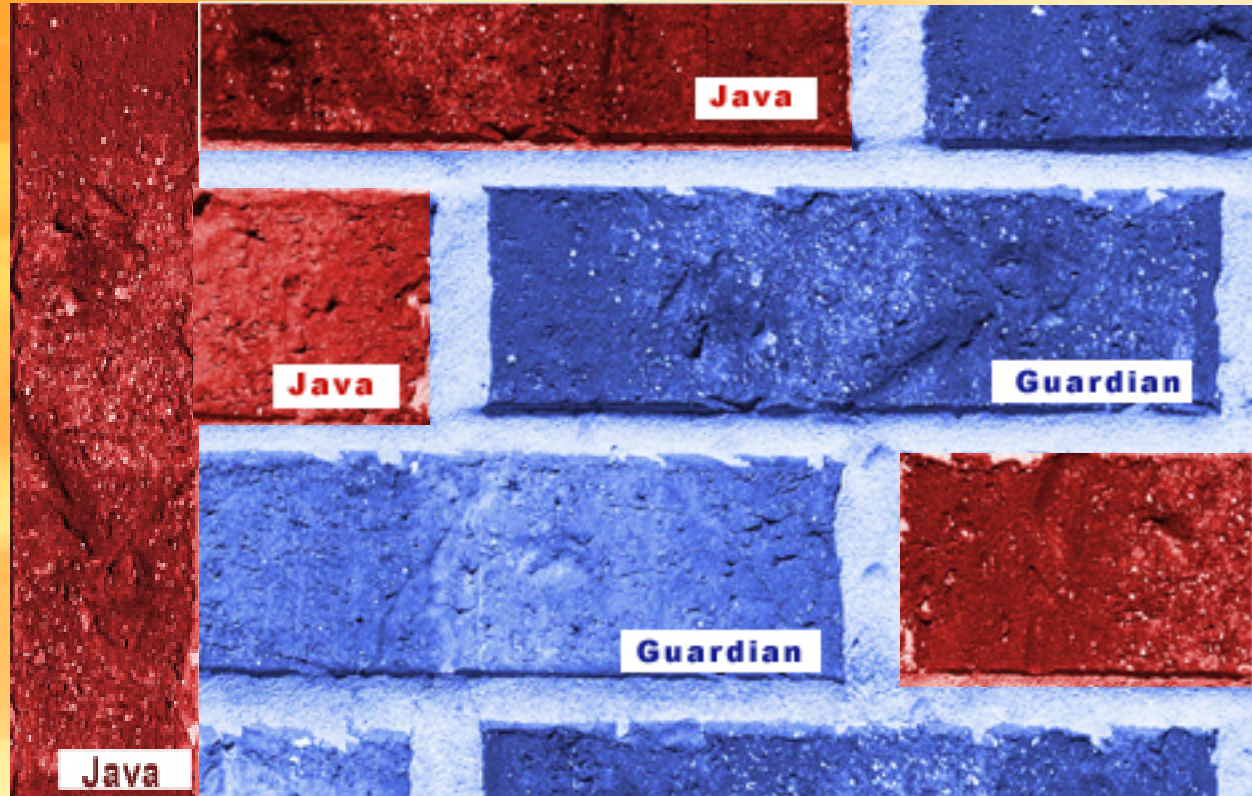
Integrate

Integrate



- **Java Struts Framework – “Traffic Cop”**
- **Tightly integrate Java technology with legacy applications**

- Struts Framework analyzes transactions
- Dynamically routes transactions to AppViewXS-abstracted Legacy Application
- or add-on Java module
- or replacement Java module



Ongoing Control of *Hybrid Environments*

Integration Benefits

Blended Legacy/Java Environment

- Legacy application presented via modern Web/GUI interface
- Legacy application extended via Java 'bolt-ons'
 - Widgets
 - Web Services
 - Java Modules
 - Java Applications
- Enhanced Value of legacy applications

Integration Benefits

Service-Oriented Approach

- **Reverse the business value equation**
 - Deliver Significant Benefits (Web, GUI, Security) up front
- **Close Cost-Before-Benefit Gap**
- **Incremental Java Integration**
- **Operate While you Integrate**
- **Match Development to Budget Cycles**
- **Self-sustaining Development**

Integration Benefits

- **Avoid “Big Bang” or “Ivory Tower” Projects**
- **Increased Feedback, Training, Acceptance**
- **Reduce Overall Costs**
- **Make Unwieldy Projects Manageable**

Legacy Solution

Rewrite

- Reduced Leverage
- Difficult Business Case

Integrate

- High Leverage
- Powerful Business Case

Renew

- Leverages Investment
- Intermediate Term



Committed to Meeting the Evolving Needs of our Customers

Host Connectivity
Data Transport Security
Application Modernization