Inside
SAPGUI for the Java Environment

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- **New member of the GUI family**

- **Platform Independent GUI**

  - **one GUI codebase for all SAP frontend platforms**

  - **full-featured GUI application, installed on frontend computer**

  - **commitment to Linux**

- **Opportunity for new architecture**

  - **Control Enabling**

  - **EnjoySAP Look&Feel**

- **Java technology**

  - **hybrid solution using Java (Swing) and C/C++**

  - **rebuild SAP's standard ActiveX controls as Java Beans**

SAPGUI Partners and Platforms

- Apple MacOS

- IBM OS/2

- Hewlett Packard HP-UX

- Sun Solaris

- Linux

- IBM AIX

- Microsoft Windows (95/98/NT/00)

- **Browser integrated GUI**

    - **leverage Java's internet capabilities**

- **Different approach: SAPGUI for HTML**

    - **SAPGUI for HTML: pure Internet technology**

    - **SAPGUI for Java: browser embedded application**

- **SAPGUI for Java can run within the browser**

    - **Internet Explorer**

    - **Netscape Navigator**

    - **today: browser integration available on Win32 only**

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- **Internet based configuration management**

  - **SAP systems, message server, routers, ...**

  - **central configuration data**

  - **all configuration maintained on web server**

- **Internet based installation and upgrade**

  - **small installer (~ 10 MB)**

  - **web deployment**

  - **installation and upgrade „on demand"**

Functional Difference to Windows GUI

- **SAPGUI for Windows has more functionality**

- **Main differences in 4.6:**

    - **Office Integration**

    - **nonstandard ActiveX controls**

    - **Drag&Drop**

    - **Archive Link Viewer**

- **Beta program now completed**

  - **first delivery with 4.6B beta 1 in 12/99**

  - **last beta version was 4.6C beta 3**

  - **positive feedback, many suggestions**

- **General Availability NOW with 4.6D (June 22, 2000)**

  - **to be delivered with 4.6D Presentation CD 2**

  - **SAPNet (now SAP Service Marketplace)**

    http://service.sap.com/sapgui

  - **sapservX**

    ftp://sapserv3.wdf.sap-ag.de/general/frontend/sapgui/java/46D

  - **Internet**

    ftp://ftp.sap.com/pub/sapgui/java/46D

Demo

- **How does it work ?**

- **What are the benefits ?**

- **Provide a display for the server**

  - **ABAP programmer defines screen layout**

- **Various protocols**

  - **direct communication with application server**

  - **NI, DIAG, RFC, GMUX, ...**

  - **C/C++ implementations available**

- **Two different models**

  - **traditional: Dynpro and list programming**

  - **new with EnjoySAP: Control Enabling**

- **External helper applications**

  - **Business Graphics**

  - **file transfer (up/download)**
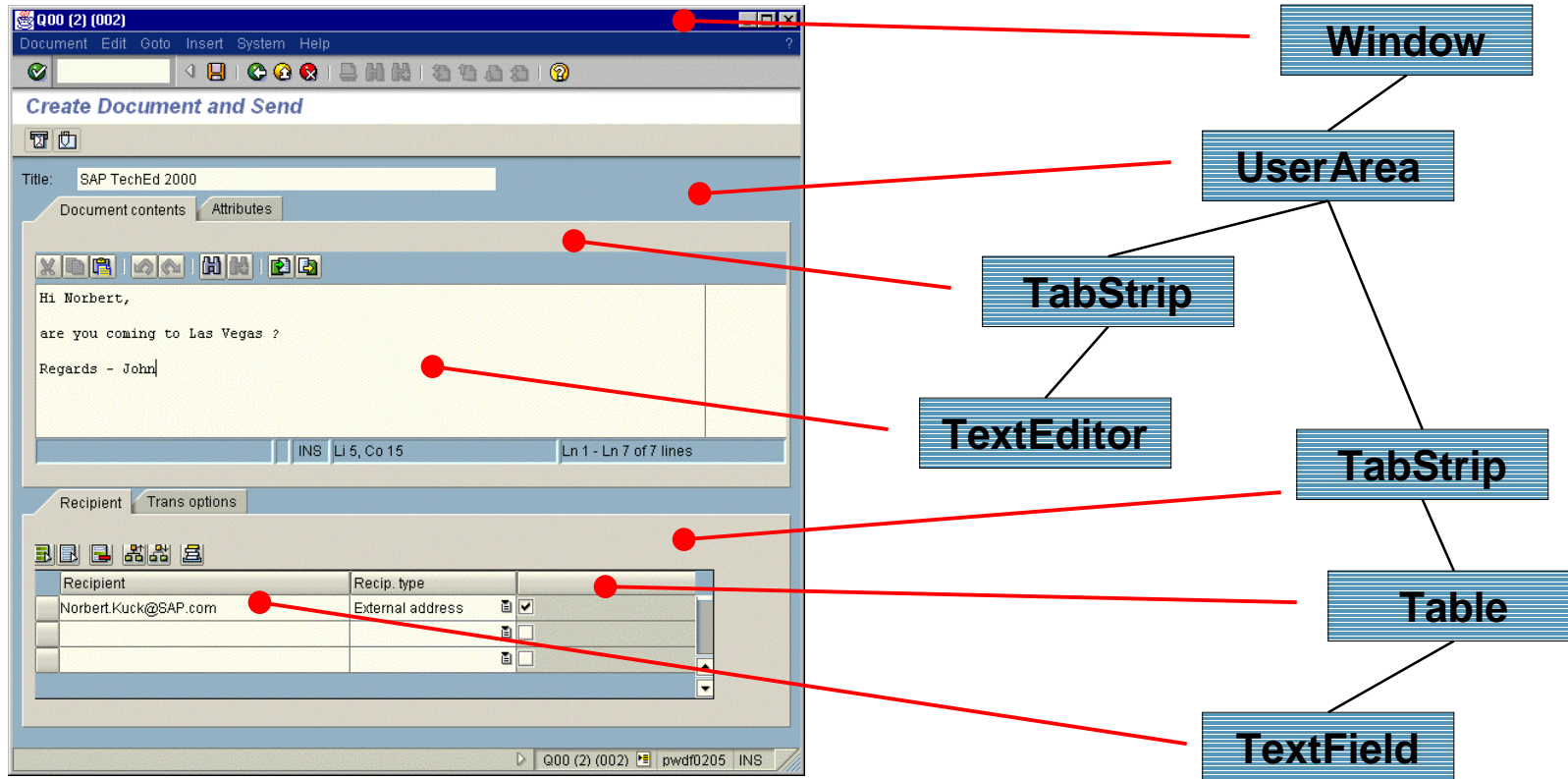
Dynpro Model
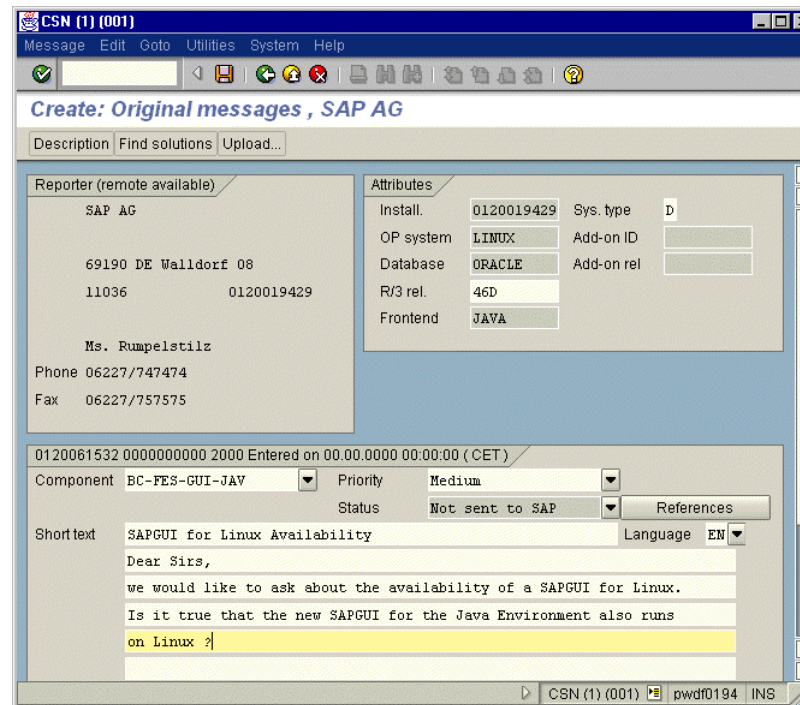
- **Server sends full „screen description"**

- **Stateless protocol**

    - **complete description is sent each time**

    - **complex parser, simple unrelated objects**

Control Enabling Model
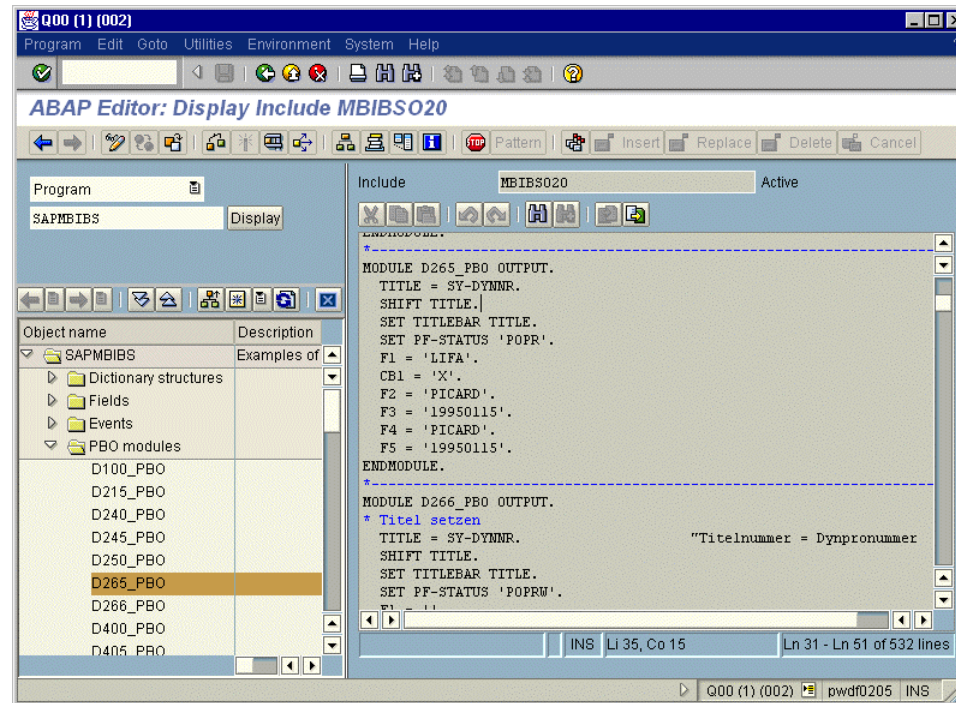
- **EnjoySAP: server sends „Automation" commands**

- **Controls are created and modified**

  - **controls keep their state, only changes are sent by server**

  - **simple parser, more complex controls**

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- **Single unified internal model**

  - **use the Control Enabling approach**

  - **map everything to Automation calls**

  - **„translate" dynpro and list protocols**

  - **split GUI into Parser and Automation Engine**

- **Parser:**

  - **C/C++ based protocol interpreter**

  - **produces automation calls**

- **Automation Engine**

  - **pure Java, with Java Beans technology**

  - **executes automation calls**

  - **object tree**

SAPGUI Object Tree

- **Unified object model**

- **No difference between Dynpro and Control Enabling**
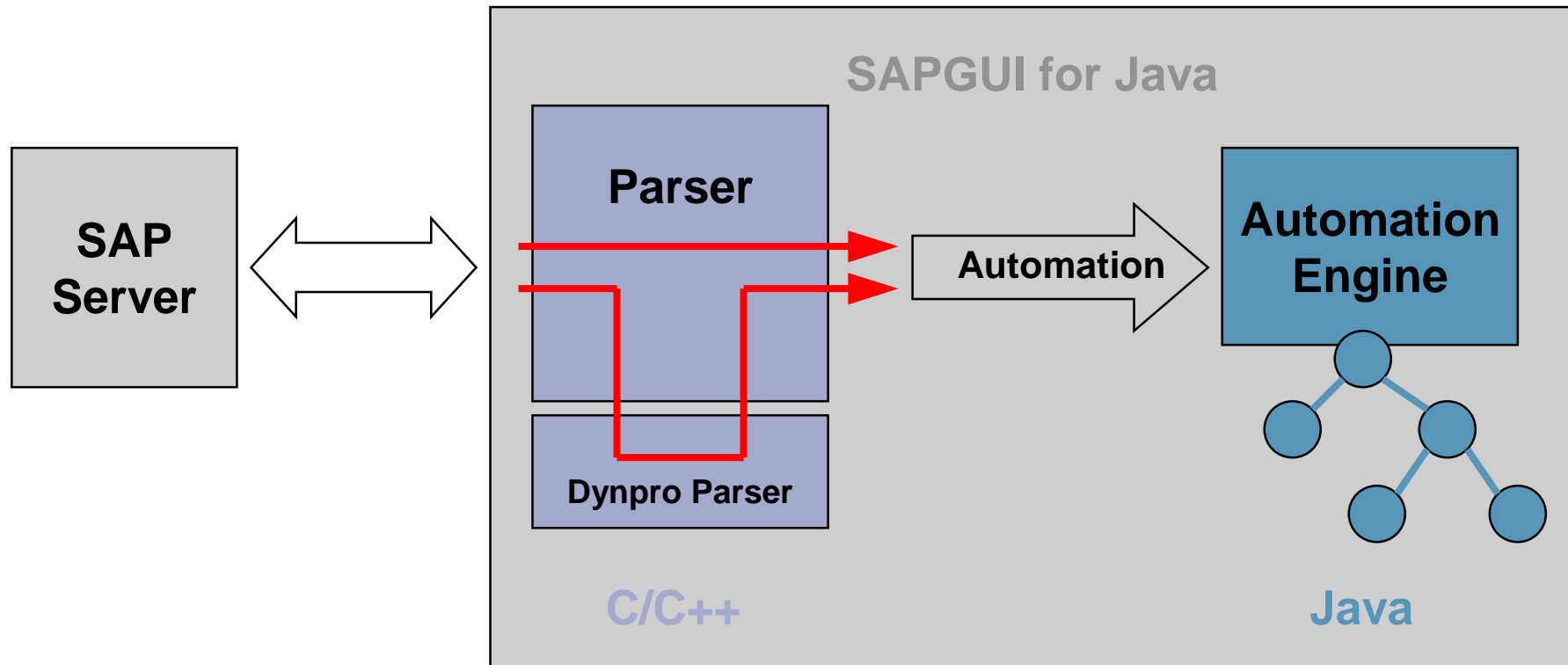
- **Automation Engine maintains object tree**

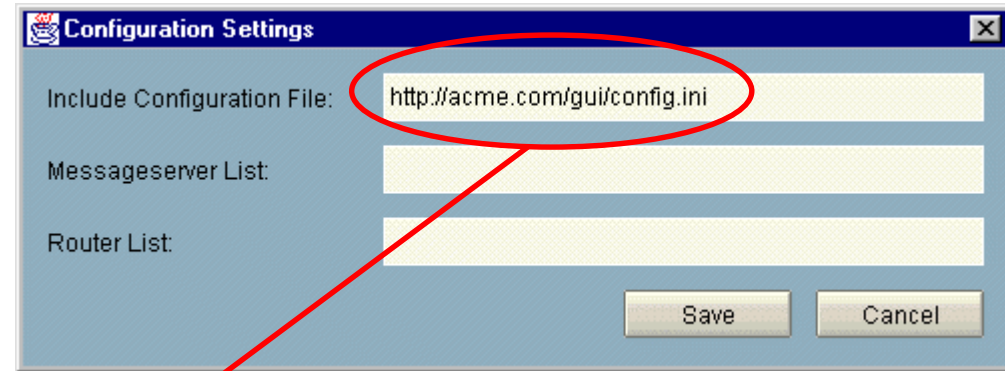- **Parser converts all input to Automation**

- **Object model is independent from parser**

  - **small interface**

  - **clean cut between C/C++ and Java**

  - **parser could easily be replaced or migrated**

  - **easy integration of new objects and controls**

- **Future ideas**

  - **more internet enabling**

  - **XML based content protocols**

  - **HTTP based transport protocols**

  - **scripting**

  - **...**

- **Distributing configuration info to client workstations**

- **Rollout and Installation**

- **GUI needs configuration information**

    - **list of available SAP systems (message servers)**

    - **SAP routers**

    - **personal choice of SAP systems**

    - **to be distributed to user workstations**

- **Solution: web based configuration**

    - **keep common configuration information central**

    - **simple files on web server**

    - **user needs to enter one URL only**

Demo

Central Configuration Information

SAPGUI for Java

Connection Options

| Accounting |
| Sales |

[New]
[Edit]
[Delete]

[Connect]

Configuration Settings

Include Configuration File: http://acme.com/gui/config.ini

Messageserver List:

Router List:

[Save]   [Cancel]

msg.ini

```
# message server list
PRD : /M/srv1.acme.com/S/3601
DEV : /M/srv2.acme.com/S/3602
TST : /M/srv3.acme.com/S/3602
```
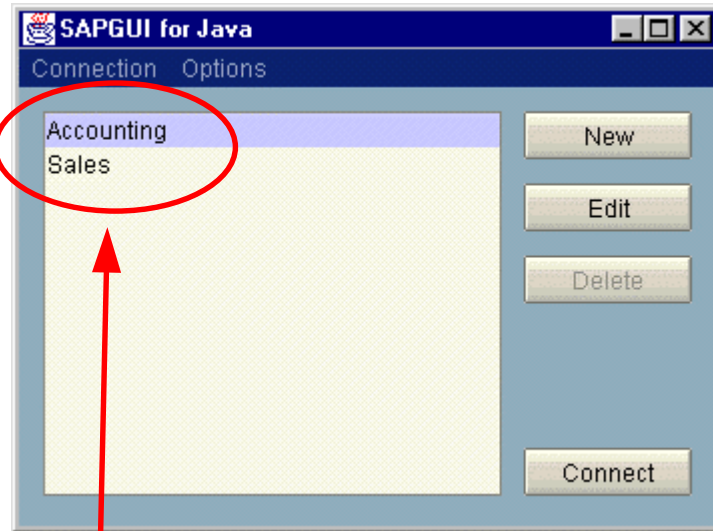
config.ini

```
# central config file
@MESSAGESERVER = http://acme.com/msg.ini
@ROUTER        = http://acme.com/rout.ini

Accounting : conn=/R/PRD/G/Finance
Sales      : conn=/R/PRD/G/Logistics
```
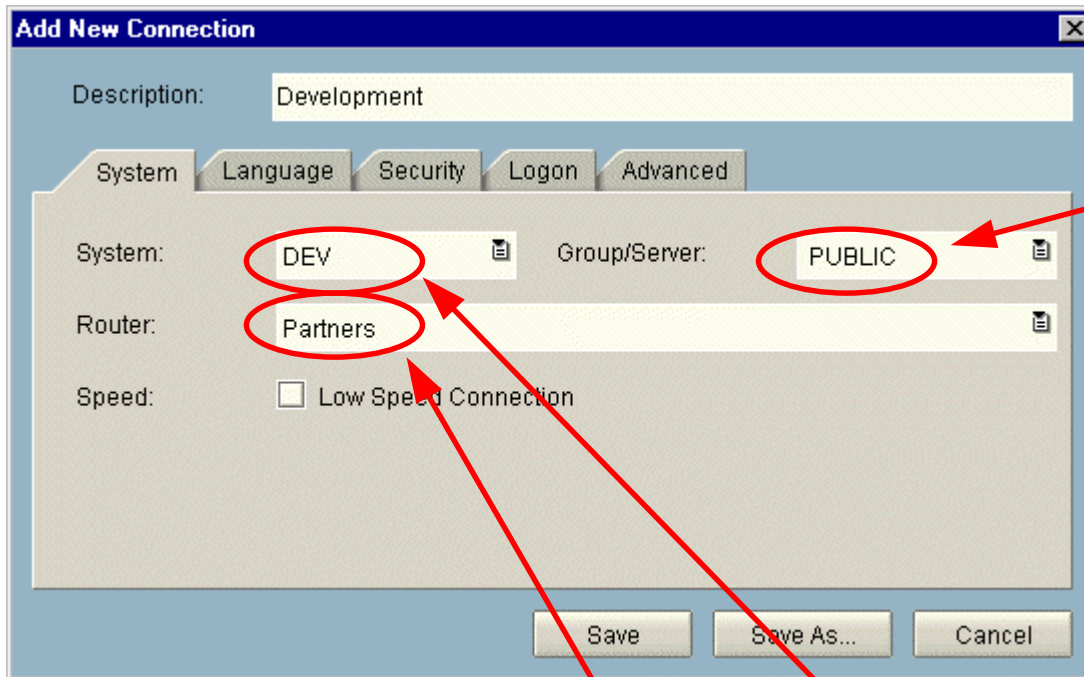
rout.ini

```
# saprouter list
Partners : /H/gate.acme.com/S/3299
```

Local Configuration Information

Add New Connection

Description: Development

System | Language | Security | Logon | Advanced

System: DEV   Group/Server: PUBLIC

Router: Partners

Speed: ☐ Low Speed Connection

Save | Save As... | Cancel

(sent by message server)

msg.ini

```
# message server list
PRD : /M/srv1.acme.com/S/3601
DEV : /M/srv2.acme.com/S/3602
TST : /M/srv3.acme.com/S/3602
```

rout.ini

```
# saprouter list
Partners : /H/gate.acme.com/S/3299
```

- **Integration into browser**

  - **install as an application, but run within the browser**

  - **web page contains reference to SAPGUI**

  - **similar concept: e.g. Acrobat Reader**

- **Installation on demand**

  - **web page must direct user to installation if required**

  - **automated upgrade: version info on web page**

- **Web page defines all connection properties**

    - which SAP server to connect

    - which GUI version is required

    - where to install or upgrade from (if required)

- **Installation programs are kept on web server**

    - downloaded and installed if required

- **First-time user is guided through all steps**

- **Once installed, SAPGUI will run in browser and standalone**

Demo

Typical User for Browser Solution

- **Who will use SAPGUI for Java in a web browser ?**

- **Internet/Intranet user who**

  - **needs more features than HTML can offer**

    - **(e.g. Graphics, Printing, File Transfer, special controls, ...)**

  - **wants more comfortable handling**

    - **(faster, less network traffic, „real" controls, ...)**

  - **is willing/able to install software on the desktop computer**

    - **(no zero installation solution)**

- **Typically not the occasional user, but a trained SAP user**

- **Intermediate between SAPGUI for HTML and SAPGUI for Windows**

- **Problem: browsers are not yet truly Java-enabled**

  - **old Java versions**

  - **no support for Swing**

- **Solution: Sun Java Plugin**

  - **use existing integration technology (ActiveX, Plugins)**

  - **embed state-of-the-art Java virtual machine**

  - **no interference with builtin browser VM**

  - **web page must explicitly refer to Sun Java Plugin**

- **Result: new VM within old browser**

  - **available today on Win32 platforms**

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- **Which steps are required ?**

  - **load the Sun Java Plugin (install if required)**

  - **load SAPGUI for Java (install/update if required)**

  - **connect to specific SAP system**

HTML: loading the Sun Java Plugin
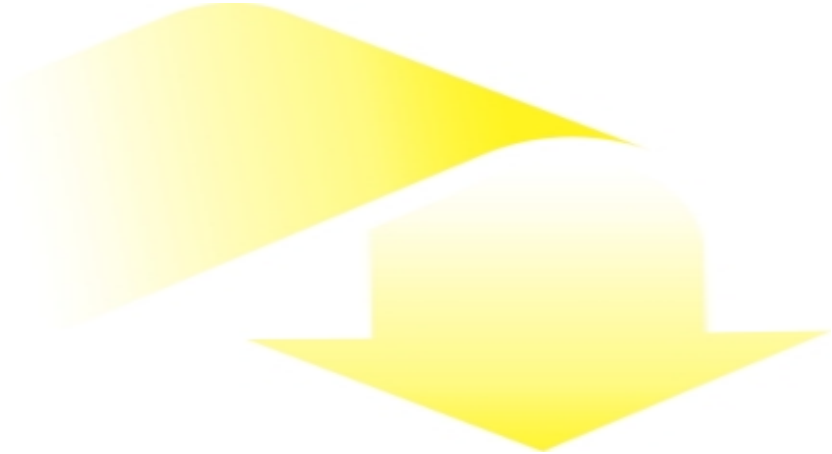
```
<HTML><BODY>
<OBJECT
     CLASSID  = "clsid:8AD9C840-044E-11D1-B3E9-00805F499D93"
     CODEBASE = "http://acme.com/gui/plugin1_1_3-win-i.exe#Version=1,1,3,0"
     WIDTH    = 100%
     HEIGHT   = 100%
     BORDER   = 0>
  <PARAM NAME = "TYPE"            VALUE =
                     "application/x-java-applet;version=1.1.3">
  <PARAM NAME = "SCRIPTABLE"      VALUE = "true">
  <PARAM NAME = "code"            VALUE = "com.sap.platin.GuiApplet">
  <PARAM NAME = "java_codebase"   VALUE = "http://intranet.acme.com/gui">
  <PARAM NAME = "installer"       VALUE =
                     "http://acme.com/gui/PlatinGUI-Win32-46D.exe">
  <PARAM NAME = "version"         VALUE = "0406040400">
  <PARAM NAME = "frog"            VALUE = "true">
  <PARAM NAME = "connectionData" VALUE =
                     "conn=/M/iwdf8997.wdf.sap-ag.de/S/3601/G/PUBLIC">
</OBJECT>
</BODY> </HTML>
```

```
<HTML><BODY>
<OBJECT
    CLASSID  = "clsid:8AD9C840-044E-11D1-B3E9-00805F499D93"
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  <PARAM NAME = "frog"           VALUE = "true">
  <PARAM NAME = "connectionData" VALUE =
                 "conn=/M/iwdf8997.wdf.sap-ag.de/S/3601/G/PUBLIC">
</OBJECT>
</BODY> </HTML>
```

- **Workplace integrates all members of the SAPGUI family**

  - **SAPGUI for HTML**

  - **SAPGUI for Java**

  - **SAPGUI for Windows**

- **Workplace roles define which GUI is used**

  - **transaction classification**

  - **personal settings**

- **Workplace server provides all that is required**

  - **web pages embedding SAPGUI for Java**

  - **installation of Sun Java Plugin**

  - **installation of SAPGUI for Java**

  - **single sign-on**

- **Full-featured SAPGUI**

- **Available for all SAP frontend platforms**

- **New architecture**

- **EnjoySAP Look&Feel**

- **Central configuration management**

- **Internet enabled**

- **Web based deployment („install on demand")**

- **Integrated in mySAP.com Workplace**

Please complete your session evaluation and drop it in the box on your way out.

Be courteous — deposit your trash, and do not take the handouts for the following session.

Thank You!

The SAP TechEd 2000 Staff