



SAS IntrNet[®], Wireless Computing

Peter Hobart

SAS UK

The Power to Know[™]

Presentation Overview

- SAS/IntrNet, what is it.
- New Features
 - SAS Design-Time Controls (R8.2).
 - Capturing of request statistics (R8.1).
 - User exit for expired or invalid sessions (R8.2).
 - Automatic header generation (R8.1).
 - Full end-to-end security (R8.1).
- Questions.



SAS IntrNet®

Other features in R8.2 (not covered)

- The Application Server and the Load Manager as a WINNT service.
- SAS/IntrNet software production on Linux.
- Additional Application Dispatcher samples.
- Simple GUI administration interface.
- A new DS2TREE HTML Formatting Tool is available to generate the input required to drive the new TreeView Applet (A Part of **SAS/Graph®**).



The Thin Client Solution

- SAS/IntrNet provides the Solution for...
 - Dynamic Reporting
 - Application Distribution
- SAS/IntrNet includes...
 - Data AND Compute Services
 - CGI and Java Technology



SAS IntrNet®

The Power to Know™



Point and click web pages with SAS Design-Time Controls

The Power to Know™

Aim of SAS Design-Time Controls

create
web
pages
fast & easy

***Without any knowledge
of SAS or HTML!***

What are SAS Design-Time Controls?

- A way to use WYSIWYG editors to provide a point-n-click interface for complex back-end SAS processing.
- Tools that adhere to the Microsoft defined Design-Time Control Standard.
 - Are supported in any HTML editor that supports this standard.



The Power to Know™

Benefits of SAS Design-Time Controls

- **Build** HTML reports and applications **quickly** within your favourite WYSIWYG editor without any need for:
 - SAS Programming.
 - HTML Writing.
- **Easy** transparent access to a variety of data sources via SAS:
 - Oracle, Sybase, Informix, etc.

How can the Controls be used?

- The SAS Design-Time Controls allow reports to be generated both:
 - Statically at design time and uploaded to a server for later viewing.
 - Dynamically at “Browse Time” by using either Active Server Pages or JavaServer Pages Technology to script calls to the SAS/IntrNet Application Server.



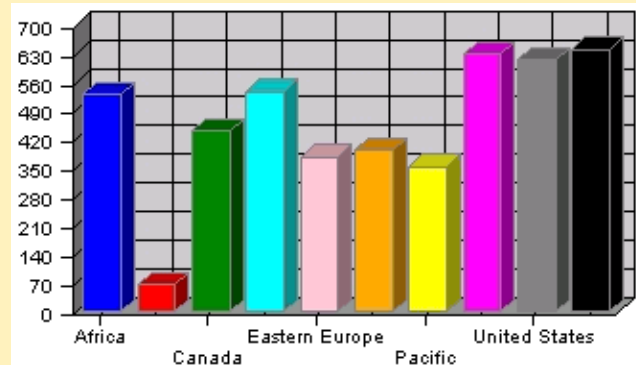
Current Collection of DTC's

<i>Control Type</i>	<i>Short Description</i>
Table	Allows the creation of HTML tables from SAS Datasets
Mddb	Allows the creation of drillable HTML tables from SAS Mddb's
Critical Success Factor	Allows the creation of CSF's from SAS
3D Graph	Allows the creation of 3D Graphs from SAS
Limited Proc Tabulate	Allows the creation of table using a subset of PROC Tabulate functionality
Stored Process	Allows the running of a user defined program
TreeView	Allows to visualize hierachical data

The Power to Know™

Examples of Output generated using DTC's

3D Graph



MDDDB Report

Down Domain/Page (hier) Top/Bottom "N" View Report
 Day/Hour (hier) Top N: 10
 Dir1/Referer (hier) Bottom

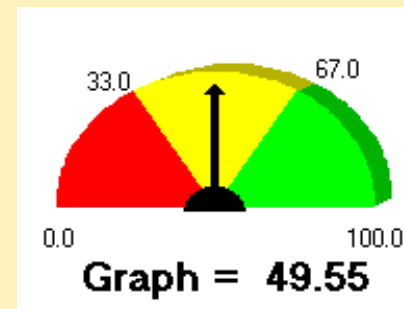
domain	Total Hits		Total Pages	
	Sum	Average	Sum	Average
aol.com	3,503		1	2,394
sanmiguel.com.ph	1,881		1	1,402
ibm.com	1,631		1	1,094
mindspring.com	1,514		2	939
uu.net	1,378		1	921
dec.com	1,254		1	886
unianides.edu.co	1,044		1	908
desjardins.com	1,005		1	832
candseek.com	985		1	860
idt.net	985		1	857

HTML Table

World Wide Sales Product Summary

Product	Number of Stores	Total Sales	Total Inventory	Total Returns
Boot	864	\$2,350,543	\$9,724,671	\$98,622
Men's Casual	399	\$7,933,707	\$17,085,253	\$311,035
Men's Dress	480	\$5,507,243	\$14,507,340	\$164,099
Sandal	564	\$868,436	\$3,232,275	\$38,170
Slipper	794	\$6,175,834	\$22,231,380	\$209,940
Sport Shoe	616	\$651,467	\$3,322,702	\$25,179
Women's Casual	270	\$4,137,861	\$9,696,651	\$131,394
Women's Dress	614	\$6,226,475	\$19,304,779	\$193,653

CSF



The Power to Know™



Where can I get them?

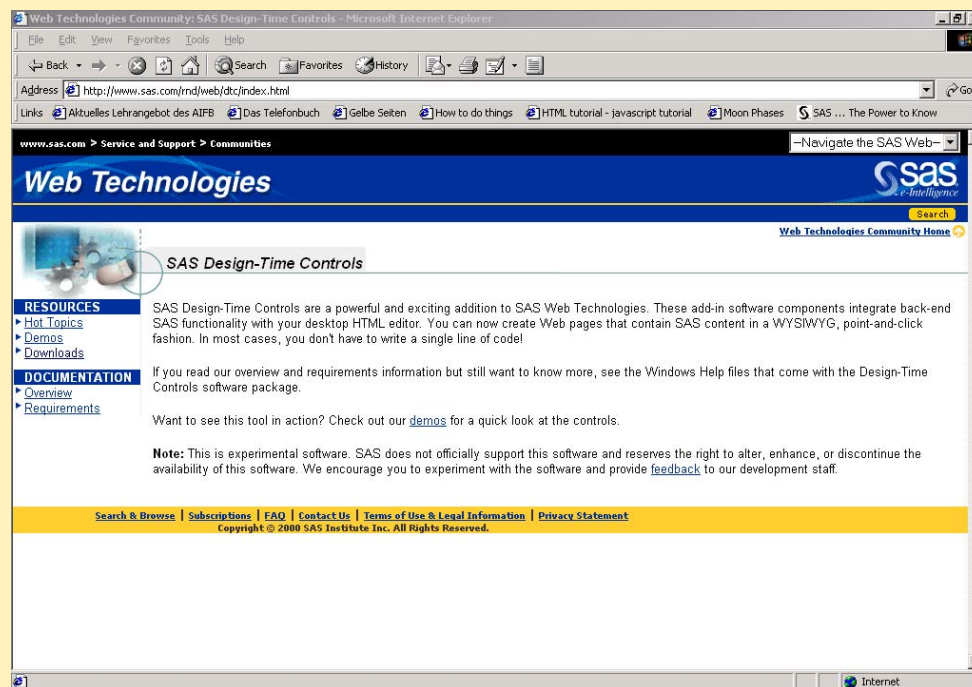
- To Download:
<http://www.sas.com/rnd/web/download.html#tools>
 - 5MB
- R8.2 Client Side Components CD

The Power to Know™



More Information

<http://www.sas.com/rnd/web/dtc/index.html>



The Power to Know™



Capturing of request statistics

The Power to Know™

Capturing of Request Statistics

- Statistics option added to PROC APPSRV.
- Allows the capturing of request statistics into a data set.
 - Data set contains a number of default variables.
 - You can also add new variables manually (not covered in this presentation).
- The data set can be used to:
 - Analyze Application Server usage and performance.
 - Give you information about what your users are doing and when.



The data! (continued on next page)

	Entry type	Request status	Session ID	Connection type	Http connection	_username variable	Service Name	Request Program
4	R	1		H	0		default	sample.procreportparam.sas
5	R	1		H	0		default	sample.procreportparam.sas
6	R	0		H	0		default	sample.hello.sas
7	R	1		H	0		default	sample.webhello.sas
8	R	0		H	0		default	sample.webods.sas
9	R	1		H	0		default	sample.web.sas
10	R	1		H	0		default	sample.webods1.sas
11	R	1	A6keMwS8H52	H	0		default	replay
12	R	1		H	0		default	sample.webods2.sas
13	R	1	BnAp0wS8H52	H	0		default	replay
14	R	1	BnAp0wS8H52	H	0		default	replay
15	R	1	BnAp0wS8H52	H	0		default	replay

The Power to Know™



The data! (continued from previous page, more on next page)

	Request Program	_entry variable	Peer address	Request start	Run time
4	sample.procreportparam.sas		127.0.0.1	1286061055.1	1.8830001354
5	sample.procreportparam.sas		127.0.0.1	1286061067.9	0.1499998569
6	sample.hello.sas		127.0.0.1	1286061087.5	0.0099999905
7	sample.webhello.sas		127.0.0.1	1286061092.8	0.5309998989
8	sample.webods.sas		127.0.0.1	1286061104.1	0.0200002193
9	sample.web.sas		127.0.0.1	1286061143.3	3.4150002003
10	sample.webods1.sas		127.0.0.1	1286061159.1	4.3059999943
11	replay	apswork.x0000007.gchart.GIF	127.0.0.1	1286061159.5	0.1100001335
12	sample.webods2.sas		127.0.0.1	1286061165	1.6019999981
13	replay	apswork.x0000009.B.HTML	127.0.0.1	1286061165.6	0.1710000038
14	replay	apswork.x0000009.gchart.GIF	127.0.0.1	1286061166	0.0999999046
15	replay	apswork.x0000009.C.HTML	127.0.0.1	1286061166.5	0.0599999428

The Power to Know™



The data! (continued from previous page)

	Run time	Server hostname	Listen port	Bytes read	Bytes written
4	1.8830001354	tykes.ehq.sas.com	5001	741	2941
5	0.1499998569	tykes.ehq.sas.com	5001	741	2941
6	0.0099999905	tykes.ehq.sas.com	5001	698	529
7	0.5309998989	tykes.ehq.sas.com	5001	704	303
8	0.0200002193	tykes.ehq.sas.com	5001	700	531
9	3.4150002003	tykes.ehq.sas.com	5001	694	3352
10	4.3059999943	tykes.ehq.sas.com	5001	702	13916
11	0.1100001335	tykes.ehq.sas.com	5001	795	10736
12	1.6019999981	tykes.ehq.sas.com	5001	733	882
13	0.1710000038	tykes.ehq.sas.com	5001	791	34898
14	0.0999999046	tykes.ehq.sas.com	5001	795	4631
15	0.0599999428	tykes.ehq.sas.com	5001	791	7073

The Power to Know™

Benefits

- Track:
 - Application Server usage.
 - Application usage.
 - Application running times.
 - Application failures.
- Allows:
 - Capacity planning and monitoring using REAL hard facts.
 - Resource allocation to be focused where it is needed.



User exit for invalid or timed out session

The Power to Know™

User exit for invalid/timed-out sessions

- Now you can specify a program to run when a session is expired or invalid.
- Nicer user notification messages with appropriate actions they can take to continue using the application.

User exit for invalid/timed-out sessions

- If session has timed out in 8.1 or before you get a generic message and you're stuck.

Application Error

RHWfM7H52 is an invalid session id.

Please notify if you are unable to correct this problem.

This request took 0.37 seconds of real time (v8.0 build 1330).

User exit for invalid/timed-out sessions

- If session has timed out in 8.2 you can inform the user and offer to let him re-login.

Dear User!

Sorry, you're Session has expired!



Please press this button to return to the beginning of the Application !

Go Back



This request took 0.49 seconds of real time (v8.2 build 1391).

The Power to Know™



Automatic Header Generation

The Power to Know™

Automatic Header Generation

- 3 choices for setting a mime type:
 - Old way:
 - Data _null_ data step.
 - New ways:
 - APPSRV_HEADER function.
 - Automatically when using ODS.
- Note:
 - Application server will automatically append a mime type of text/html to all outgoing responses where no mime type was defined.
 - This means that the ODS dynamic option is no longer required.

Automatic Header Generation

- The following ODS output destinations generate appropriate default Content-type headers, which means you do not need to make use of the data null steps or the APPSRV header function:
 - HTML
 - GIF
 - JPEG
 - PDF
 - POSTSCRIPT

Automatic Header Generation

- Benefits:
 - Programmers don't have to manually create a mime type "data _null_" data step.
- Note for backwards compatibility:
 - If a mime type has been set using a „data _null_” data step then the default text/html will not be appended by the application server.



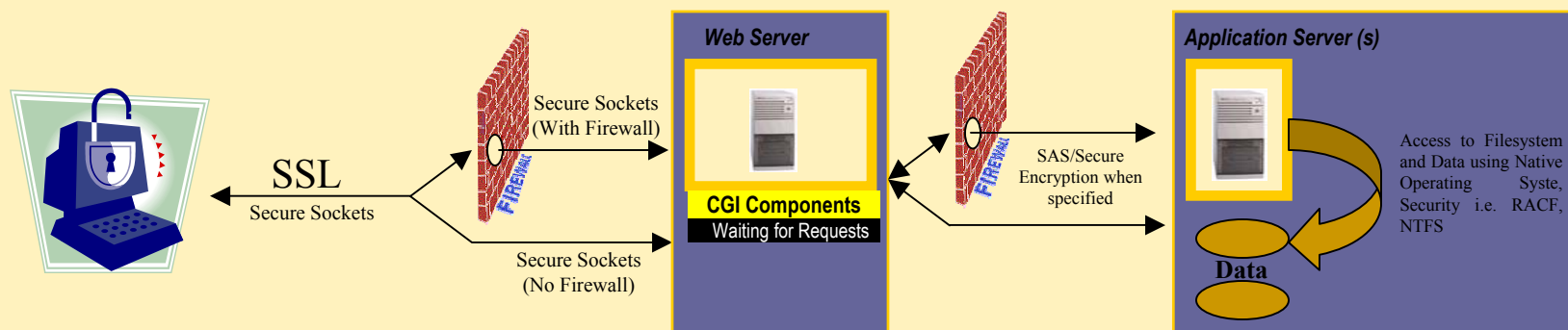
Full end-to-end security

The Power to Know™

Full End-to-End Security!

■ From Web Browser to the File System:

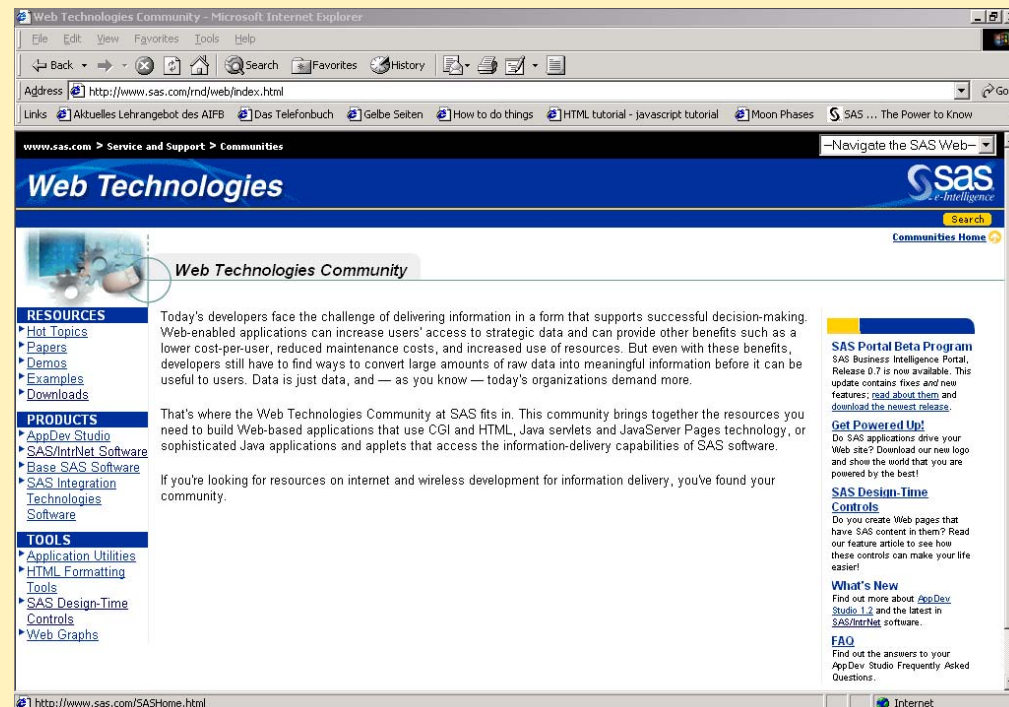
- Secure sockets and/or firewall between the Web Browser and the Web Server.
- Encryption and/or firewalls between the Web Browser and the SAS Server.
- Native O/S security for access to the File System.





More Information

<http://www.sas.com/rnd/web/index.html>



The Power to Know™

What about the wireless world?

- **"The idea of accessing data from anywhere is simply too compelling to fail."**

Source: **"The Wireless Industry's Three Challenges for 2001"** by David Haskin



The Power to Know™

What about the wireless world?

How does SAS/IntrNet support it?

- You can **use SAS/IntrNet** to create WML or any other markup language to forward to the appropriate device.
- It is as easy as using HTML.
- Only the markup changes.

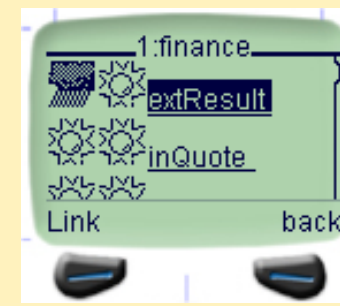


What about the wireless world?

New

How does webAF™ 2.0 support it?

- Drag & drop support for building wireless applications using JSP or Java-Servlets
- „iPAGE components“ to develop screens on wireless devices



The Power to Know™

Problem: The „Markup Mess“

- Global deployment of information on wireless devices means:
 - Supporting **several markup languages** (i.e. WML, HDML, WebClipping, iMode-CHTML, HTML Version 3.2, soon XHTML Basic)
 - Very **different user interfaces** (Palms, small mobile phones with nearly no data entry, Nokia-Communicator like devices)
 - **Bandwidth differs** – generally it is small



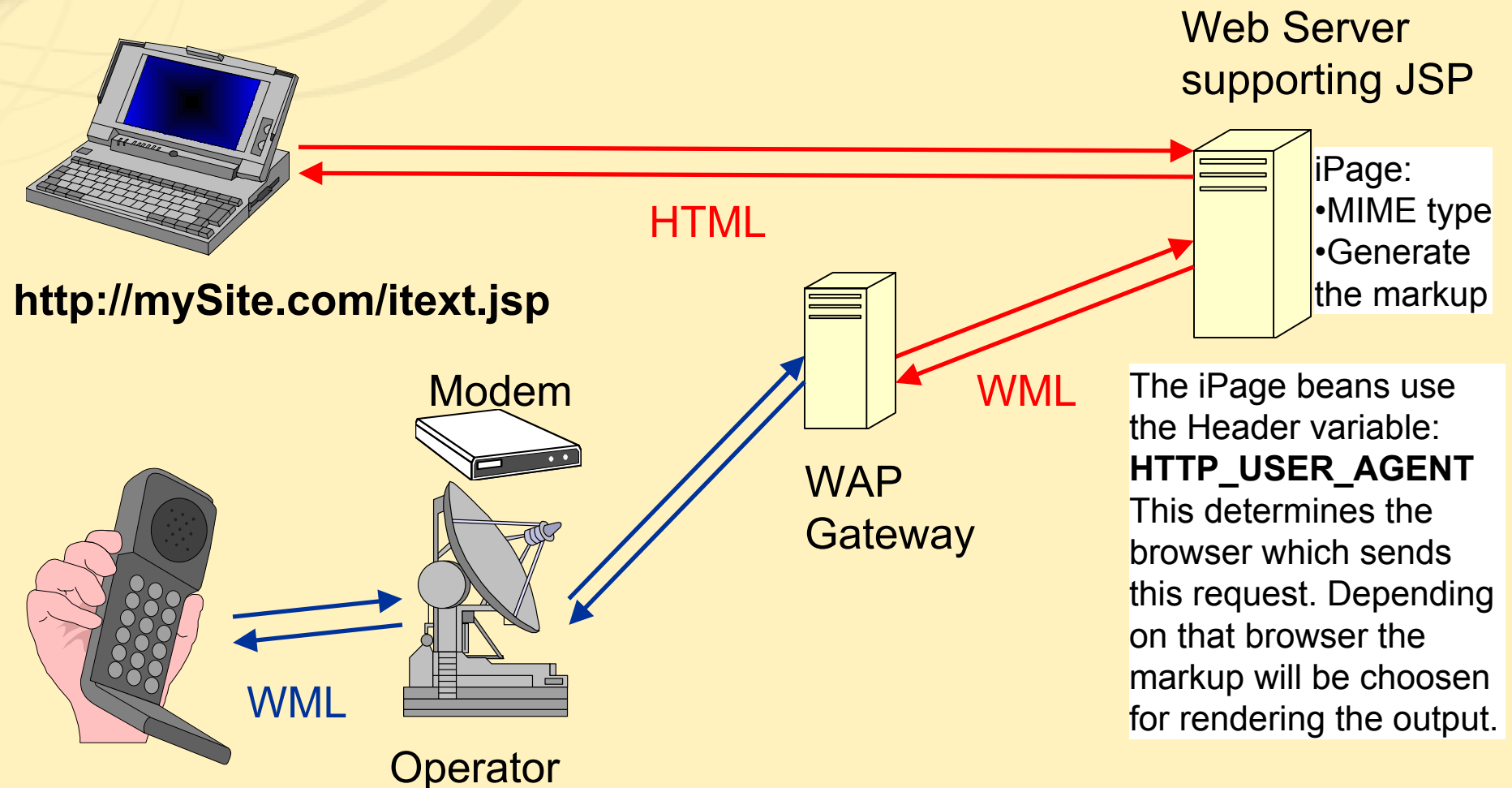
Solution: „iPage Elements“

What are they?

- They're part of webAF 2.0
- Implemented as JSP custom tags
- Part of the SAS custom tag library
- Transformation Beans

The Power to Know™

How do „iPage Elements“ work?





One Code – Multiple Markups

- Key advantages:
 - To create any markup
 - depending on the device
 - WML, HTML or HDML
 - One JSP for (nearly) every device/ markup
 - Markup transformation at runtime

The Power to Know™

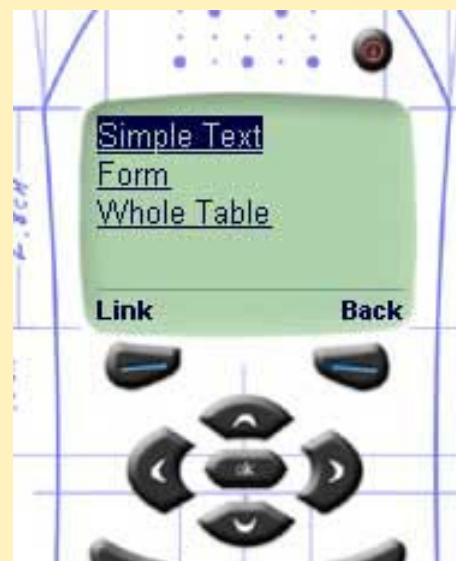


One Code – Multiple Markups

- Key advantages:
 - Can be used in the visual development environment of webAF
 - Support for drag & drop as well as for Java coding
 - Size of output markup is small due to low bandwidth
 - No client side scripts maximizes the number of supported devices.

The Power to Know™

Example – index.jsp



The Source – index.jsp

```

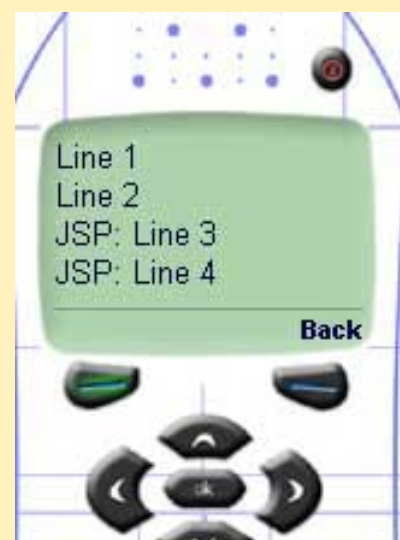
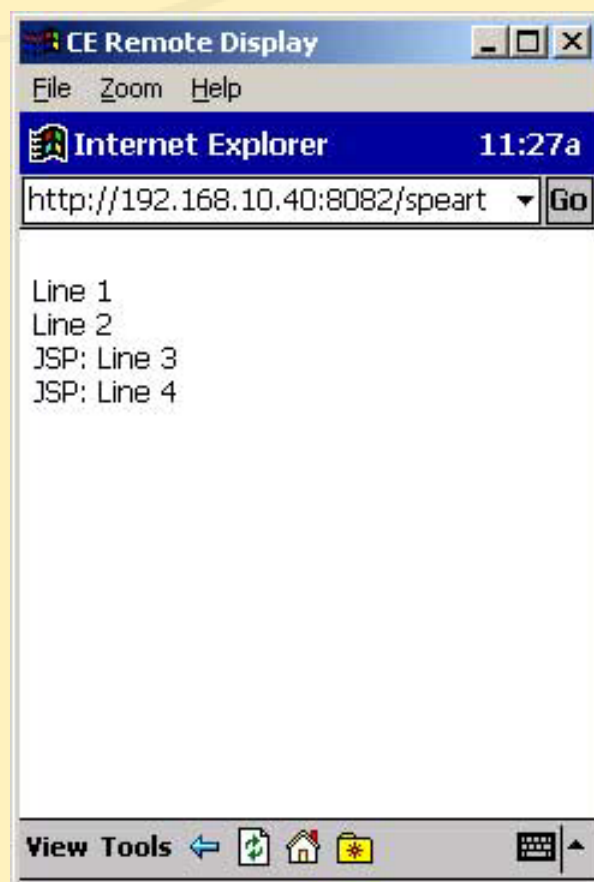
3 <sasads:iMenu id="iMenu1" >
4   <sasads:iMenuItem URL="test.jsp" description="Text"/>
5   <sasads:iMenuItem URL="" description=""/>
6   <sasads:iMenuItem URL="" description=""/>
7 </sasads:iMenu>

```

■ **URL:** This is the destination of the link. Use the normal syntax known from HTML href-tag.

Description: This text is displayed and can be selected.

Example - text

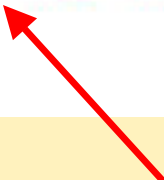


The Source – text.jsp

```

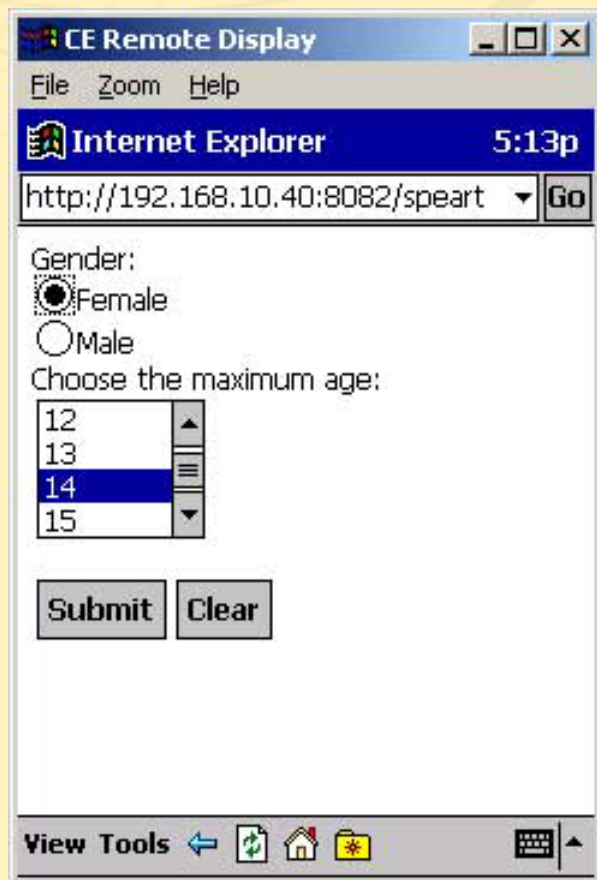
2 <@taglib uri="http://www.sas.com/" tag
3 <% String txt = "JSP: Line 4"; %>
4 <sasads:iText id="iText1" >
5     Line 1
6     Line 2
7     <% out.print("JSP: Line 3"); %>
8     <%=txt %>
9 </sasads:iText>

```



The two last line inside the iText tag show two ways to use Java for creating output

Example -form



CE Remote Display

File Zoom Help

Internet Explorer 5:13p

http://192.168.10.40:8082/speart Go

Gender:

☒ Female

☐ Male

Choose the maximum age:

12

13

14

15

Submit Clear

View Tools



Gender: Female

Options Back



Choose the maximum age:

Options Back



Choose the maximum age: 14

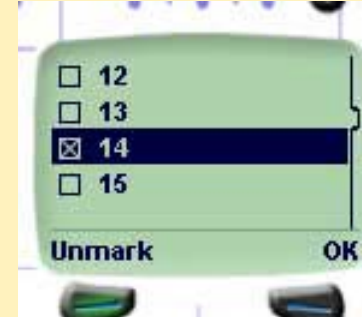
Options Back



☒ Female

☐ Male

Select OK



☐ 12

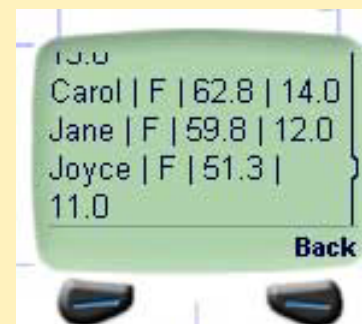
☐ 13

☒ 14

☐ 15

Unmark OK

Example - table



NOKIA Partnership & AppDev Studio 2.0

- NOKIA Activ Server 2.0 is on the AppDev Studio™ 2.0 media
- Customers can get a 90 day trial license with writing a mail to [NokiaLicense@s](mailto:NokiaLicense@sas.com)
 - Enough to build a pilot and test it in a real environment





Questions



The Power to Know™