

Welcome!

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LB BW

Landesbank Baden-Württemberg



IMS Connection using Mainframe-based Web Services at LBBW



Agenda

- **History**
- **Web services on the mainframe**
- **Lessons from the proof-of-concept**
- **The decision to go with Web services and Ivory at LBBW**
- **Our experience at LBBW**
- **The results**

Landesbank Baden-Württemberg (LBBW)

Top 5 bank in Germany; Top 50 globally

428 bill EUR revenue (FY2006)

12,250 employees

Offices

- HQ: Stuttgart, Karlsruhe and Mannheim
- 216 branch offices
- LBBW also operates branches in New York, London and Singapore

LBBW





Current Environment (Project-Focus)

Staff

- Tenure / Skills

Hardware

- Mainframe 2x Z9 (Mod. 705)

Software

- z/OS V1.8
- IMS V9
- DB2 V8

Banks

- Securities Services for 80 other Banks (Savings Banks)

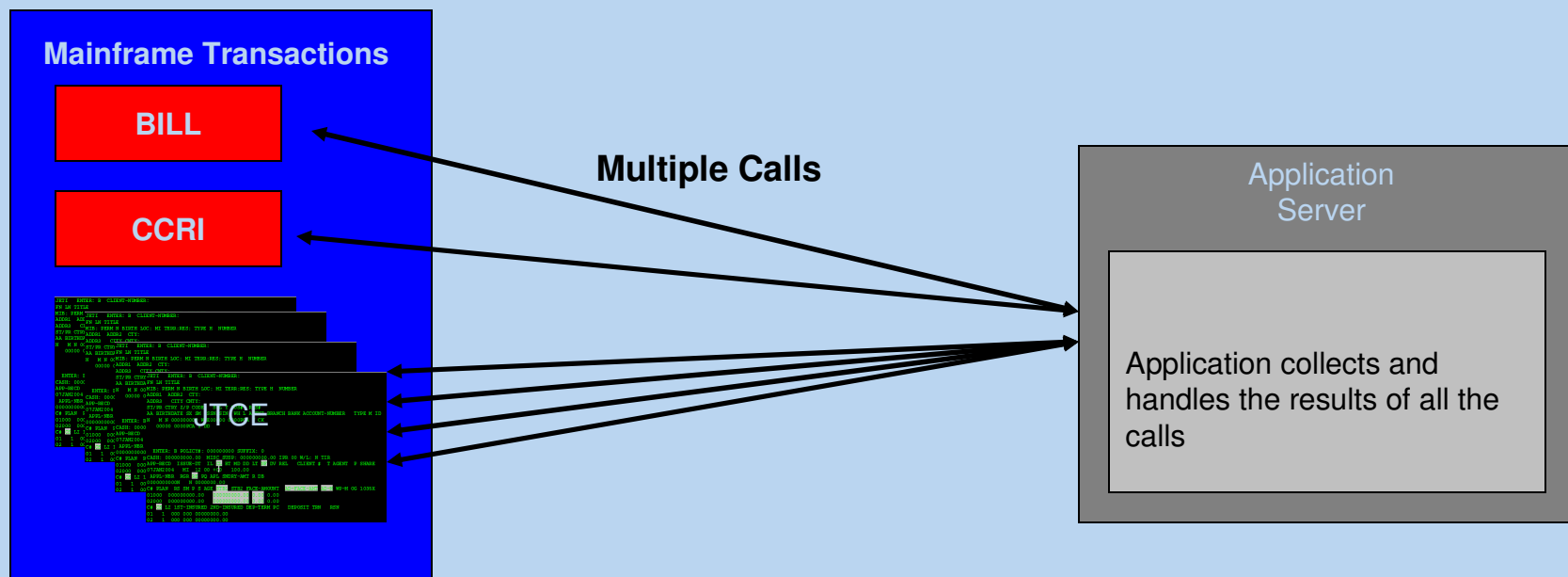
Challenge

- Business opportunities demanded that LBBW update its' securities application
 - Required an easy to use Web-based interface
 - Serves LBBW counsellors and councellors of the savings banks
- Current system is based on COBOL (1000+ COBOL programs), IMS and DB2
- Very tight timeframe

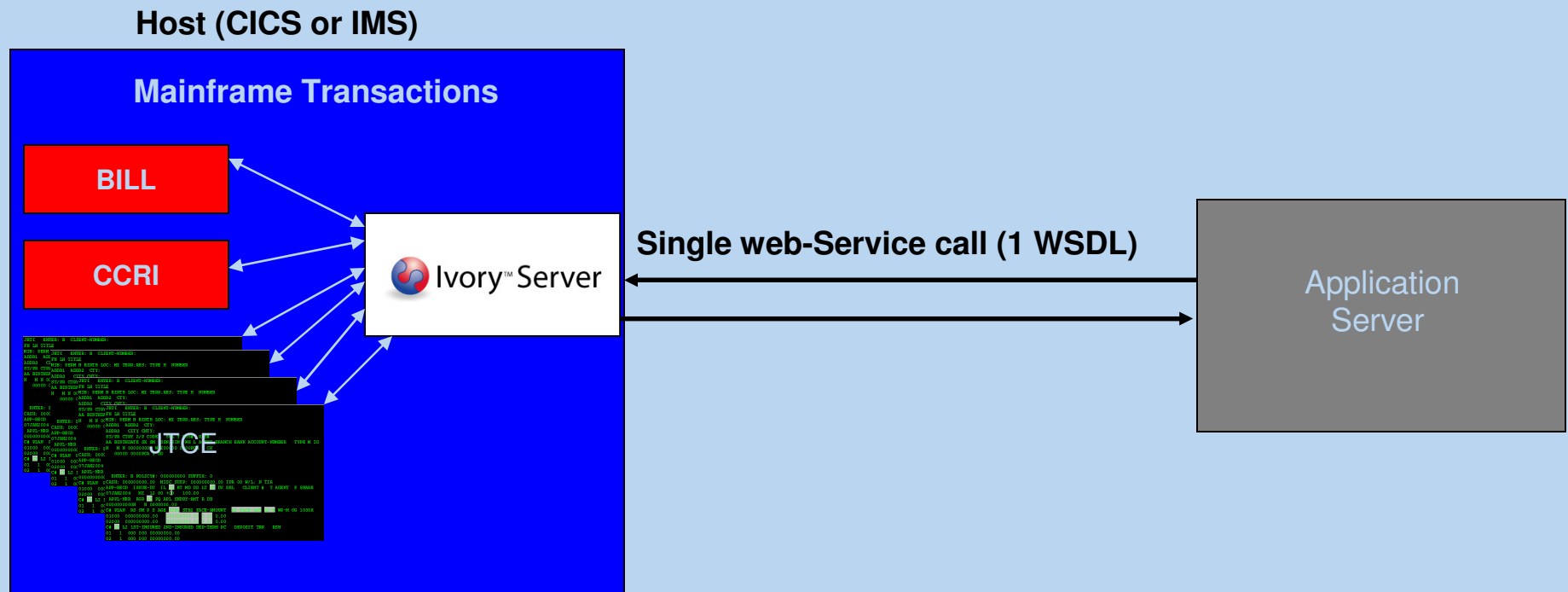
Objective

- Re-write of business logic not acceptable
 - Business logic required to remain on the mainframe in IMS
- Separate layers for business logic and user interface
- Use of standards
- Reuse the newly-built services
- Effective support of partner/software vendor

Common approach for using Web services

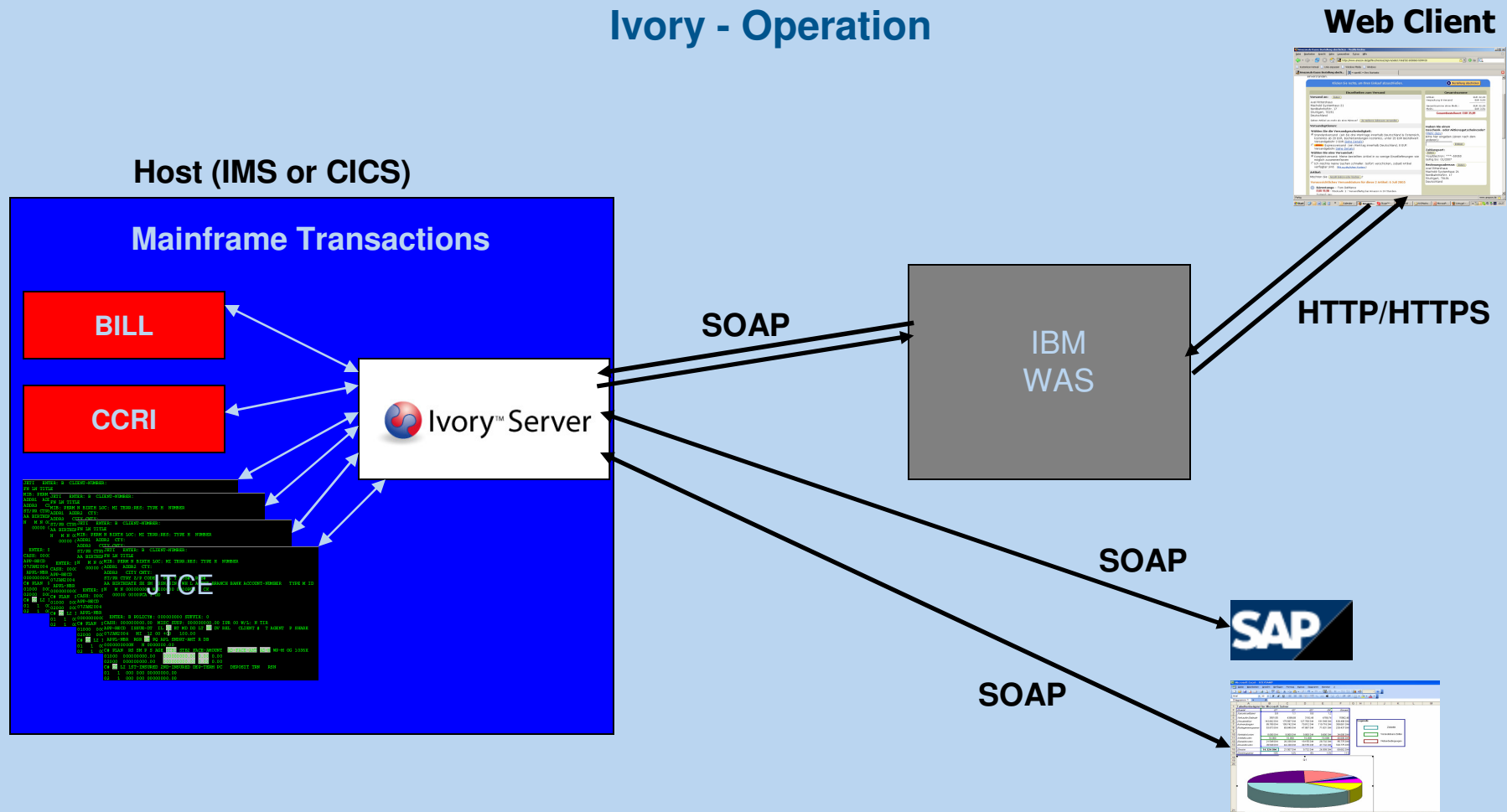


The Ivory approach for using Web services



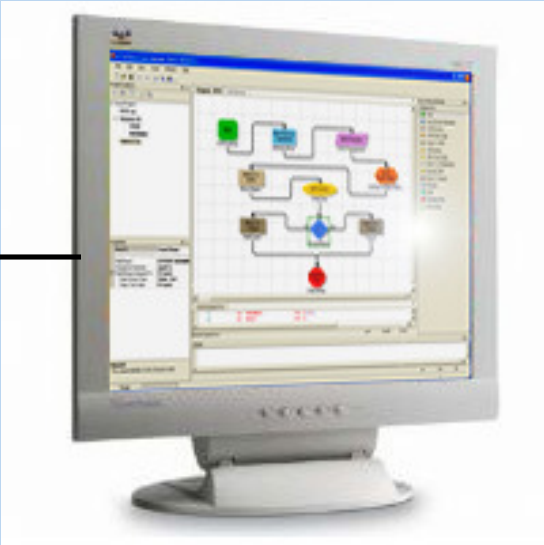
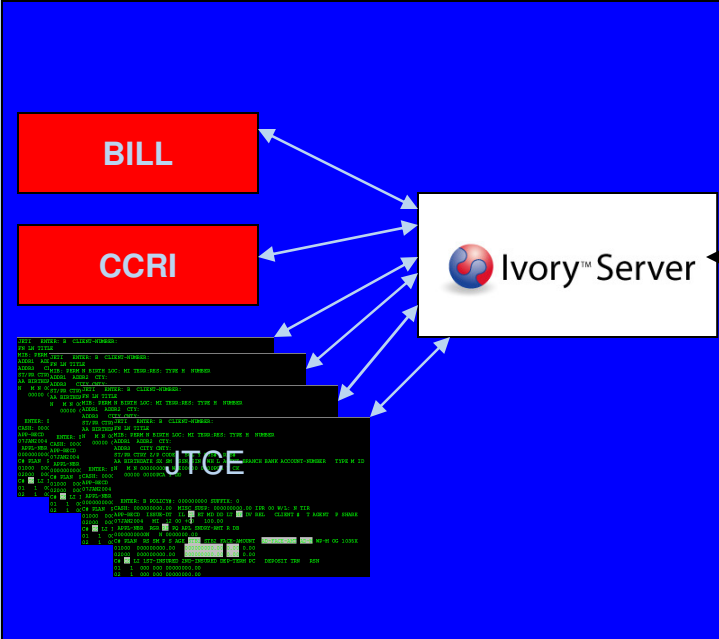
Web Services and IMS with Ivory

Ivory - Operation



Ivory – Development Tool

Ivory Studio



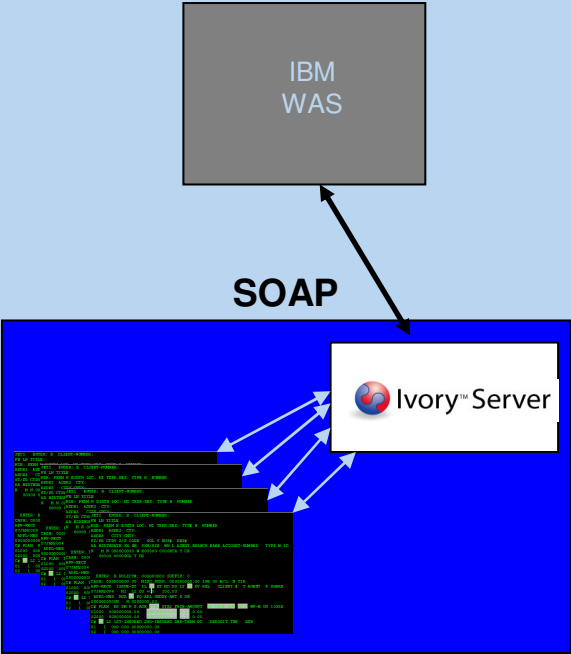
Lessons from the POC (I)

IMS conventionally (3270/MFS):



Data-Input often distributed over many Screens
Carried out in Conversational-Mode (using SPA)

Web Service:



One request from the front-end
with one reply (including all Data)

- **Conversational-Mode is not recommended**
 - Changing the existing application is to be done
 - Increased expenditure – new (non-conversational) components may be the better investment
 - Increased risk

- **Resource-consumption of the Ivory Server is partially compensated by using the „One-Step“ practice**



The decision to go with Web Services and Ivory

- **Maintaining the Business Logic of the securities application on the IBM Mainframe
(in IMS Transactions)**
- **Using standards (XML/SOAP/etc.)**
- **Separating the Business-Logic from the Frontend (Chance for verification of the own core competence)**
- **Reusability**
- **Tool (Ivory) is exchangeable**
- **Very good and very qualified assistance by the vendor (GT Software)**



The Experience at LBBW

- **High motivation in the whole project-team because of the new technology**
- **Change of thinking from conventional practice to methods and objects is needed and takes place as a matter of routine**
- **Resistance of the front-end developers changed after a few weeks to excitement**
- **Short realization time (8 months)**
- **Automatic start of renewing activities (phase out from the old application, reducing the number of front-ends of the securities application)**
- **Big interest in the web service technology by other projects**

The Result

new

BOSPlus - Mastersession - Microsoft Internet Explorer provided by LBBW

Adresse: <http://sweb001.entw.bank.lbbw.sko.de/bosplus/start.do>

Sparkasse Ulm Kontakt Leitfaden Formulare FAQ

Kauf

1) Daten wurden korrekt erfasst

Ordernummer: 107L045 Erfasst durch: Schultz Op6 Datum: 14.02.07 17:28
Status: Erf. Freigegeben durch: Zugang: BOSPlus

Allgemein Zusatzdaten Konditionen

Die mit * gekennzeichneten Felder sind obligatorisch.

ISIN:	DE0007100000	Wertpapierbez.:	DAIMLERCHRYSLER AG / NAMENS-AKTIE O.N.
WP-Risikoklasse:	04		
Depot-Nr.*	psn3	Kurzadresse:	FLEISCHER WALTER O. MARG
Auftraggeber*	Depotinhaber	Verrechnungskonto (EUR):	622828
Nennwert / Stück*	1.000	Kurswert 29.12.06 EO	47.000,00
Börse:	Stuttgart	Handelsart:	Variabel
Limit:	BILLIGST	Limitzusatz:	<input type="checkbox"/> stop-buy
Gültigkeit / Datum:	Gültig bis 14.02.2007		
Gesprächsteilnehmer:		Abschlussberater:	
Ordererteilung erfolgte:		Ohne Beratung:	<input type="checkbox"/>

Prüfen Kauf freigeben Abbrechen Drucken Hilfe

old

Landesbank Baden-Württemberg 14/02/07 18:39:25
Neuabrechnung Verkauf Aktien Seite 1

Masko 0321
Ordernummer 4262565 Status ABGER

Instituts-Nr 71886 Freig. LOCKNER NICOLE 29.12.06 11.82
Depot-Nr 3999908 Kurzadresse WRIEL-KREISSPARKASSE

ISIN DE0001000007 Wertpapierbez. HSBC Trinkaus & Burkhardt AG
Ruftraggeber V Call 14.03.07 TwoDRX 658

Nennwert/Stück 2.500
Limit BESTENS gültig bis 29.12.2006
Börse STUTTGART Kassa/Var. V
Kontrahent

Abr. Konto Einzug/Überw. Verschußzins
Abrechnungswahrung Wahrungskonto
Verwahrart G Lagerstelle 11882 Sonderheit
Depotart Stückart
Gesprächsteilnehmer OB/FITZERMANN, PETER 10:50H/FELLD.-FR. FRIBER
Rufe -> Masko -> Bit -

PR1 drücken, wenn weitere Daten gewünscht
PF1-Hilfe/PF2-Abmeld./PF3-zurück/PF4-Hauptmenue/PF10-Storno/Neuabrechnung
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Met the aggressive timeline (8 months)

Mainframe developers learned SOA concepts and implemented Web services with Ivory in a “learn by doing” manner

- Fast and effective service development done by LBBW's mainframe developers

High acceptance of mainframe access through Web services by Java developers

- Web Services is the new internal standard

Web services reuse ~ 80% for next brokerage project

- Time and money savings

IMS and the mainframe are the cornerstones of LBBW's SOA



Next Steps

Enable the Host developers to make graphical Frontends.

Build new Frontends for the Securities Systems only as graphical Frontends – based on Web services.

Exchange the 3270 Linemode Frontends of the Securities Systems by graphical Frontends (basis: Web services) and redesign the functionality of the Frontends.

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