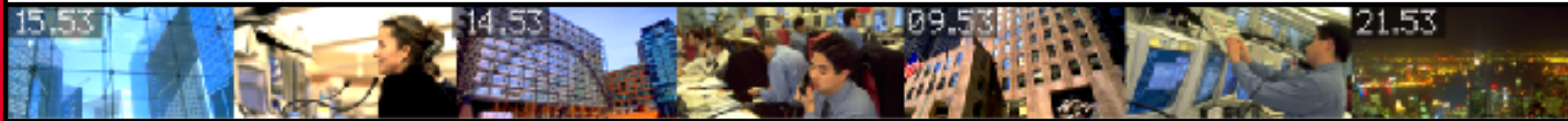


Proof of Concept (POC) Proposal

A PowerBuilder Front-End for SAP !

Introducing SAP Access from PowerBuilder Applications (using Java EJB)

presented by Garfield Allen (for the Switzerland PowerBuilder Users Group)



Proof of Concept (POC) Proposal

A PowerBuilder Front-End for SAP !

Contents:

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Part 2: History : Where Does This Project Come From ?

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Proof of Concept (POC) Proposal

A PowerBuilder Front-End for SAP !

Part 1: MOTIVES: Why Have a PowerBuilder Front-End for SAP ?



PART 1: MOTIVES

Enhance existing SAP User Interface tools:

- SAP GUI and SAP Fiori are both very good tools, but they lack the PowerBuilder DataWindow
- The PowerBuilder DataWindow has the potential to greatly enhance the SAP user experience.



PART 1: MOTIVES

Newer User Interface solutions for older SAP systems:

- PowerBuilder (using Java) can be compatible with any SAP system that has a Java interface.
- In this manner, older SAP systems can be “modernised” with a newer User Interface.



PART 1: MOTIVES

Combine SAP with non-SAP systems:

- SAP can be combined with non-SAP (database) systems in a single unified User Interface.
- Data can be exchanged between SAP and non-SAP systems quickly, easily and safely.



PART 1: MOTIVES

You already have both SAP and PowerBuilder ?:

- Then this a “no-brainer” !
- Leverage your PowerBuilder skills and integrate your PowerBuilder and SAP systems.



PART 1: MOTIVES

It's free !:

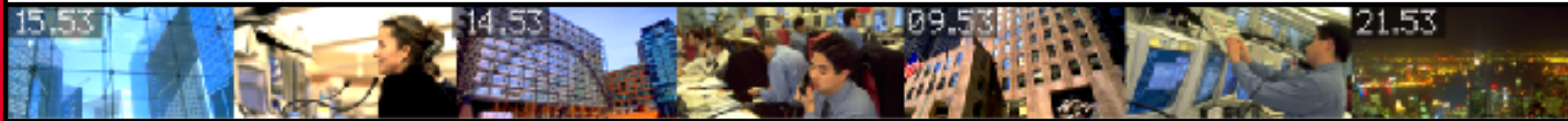
- The cost of this system is 0.00 euros (approx 0.00 dollars).
- This system is strictly Open-Source.



PART 1: MOTIVES

Why not !:

- Sybase merged with SAP many years ago and no-one has tried to do this yet !!
- It's a challenge and it's FUN :-))



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Part 2: History : Where Does This Project Come From ?



PART 2: HISTORY

The Origin of PowerBuilder SAP (I) - 3TX:

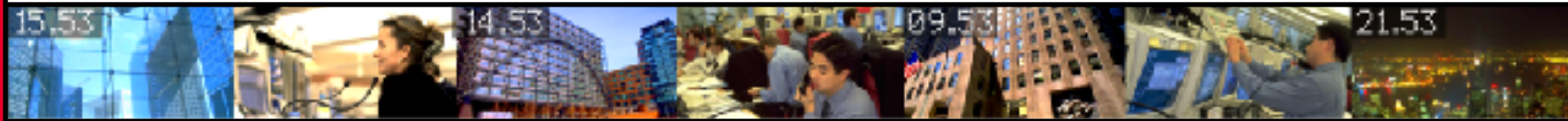
- This project is largely based on 3TX - the PFC java extension library (see here - <https://slideplayer.com/slide/4789855/>)
- It has “***stolen***” most of the code from that library.
- It’s not a problem because I know the developer of that system very well and he doesn’t mind ;-)



PART 2: HISTORY

The Origin of PowerBuilder SAP (II) - Sybase-SAP Merger:

- SAP acquired Sybase in 2010
- Many people “assumed” that former Sybase database tools would be integrated with SAP
- This integration process did not happen :-)
- So we, the developers, are now doing it ourselves - starting with PowerBuilder.



Proof of Concept (POC) Proposal

A PowerBuilder Front-End for SAP !

Part 3: Description: How Does It All Work ?



Part 3: Description

Uses 3-Tier Architecture:

- This system uses PowerBuilder's 3-tier architecture.
- The PowerBuilder client connects to a J2EE Java server (in this case, WebLogic).
- The Java Server then connects to SAP using the Java Connector (JCo)
- The JCo then interacts with SAP using SAP BAPIs



Part 3: Description

Uses Standard Software Elements:

- 100% standard software (no special objects or libraries)
- SAP Java Connector (JCo) - the standard SAP Enterprise Java library.
- SAP BAPIs (either standard BAPIs or user-defined BAPIs)
- Standard EJB 3.1 Java components.
- Standard PowerBuilder 3-tier objects for java servers (ejbconnection, javavm).



Part 3: Description

Available in Two Styles of Architecture:

- Direct connection (PowerBuilder to Java server)
- Indirect connection (PowerBuilder to DataBase then DataBase to Java server)



Part 3: Description

Direct Connection - ADVANTAGES:

- Faster processing
- Simpler to implement
- Implementation Agnostic (from PowerBuilder's point of view)

Direct Connection - DISADVANTAGES:

- Cannot use APPEON
- Requires that each users' client machine runs the same version JVM as the Java server



Part 3: Description

Indirect Connection - ADVANTAGES:

- Uses APPEON
- No java requirements for the users' client machines (the DB server is the only client)

Indirect Connection - DISADVANTAGES:

- Slightly slower
- More complex to implement.
- Is DataBase specific (each DB has its own Java connection)



Part 3: Description

No Web-Services:

- **ADVANTAGE:** This system does NOT use Web-Services (WS are complex and limited when compared to native Java).
- **DISADVANTAGE:** This system does NOT use Web-Services (WS are quasi universal in the industry and are platform agnostic).



Part 3: Description

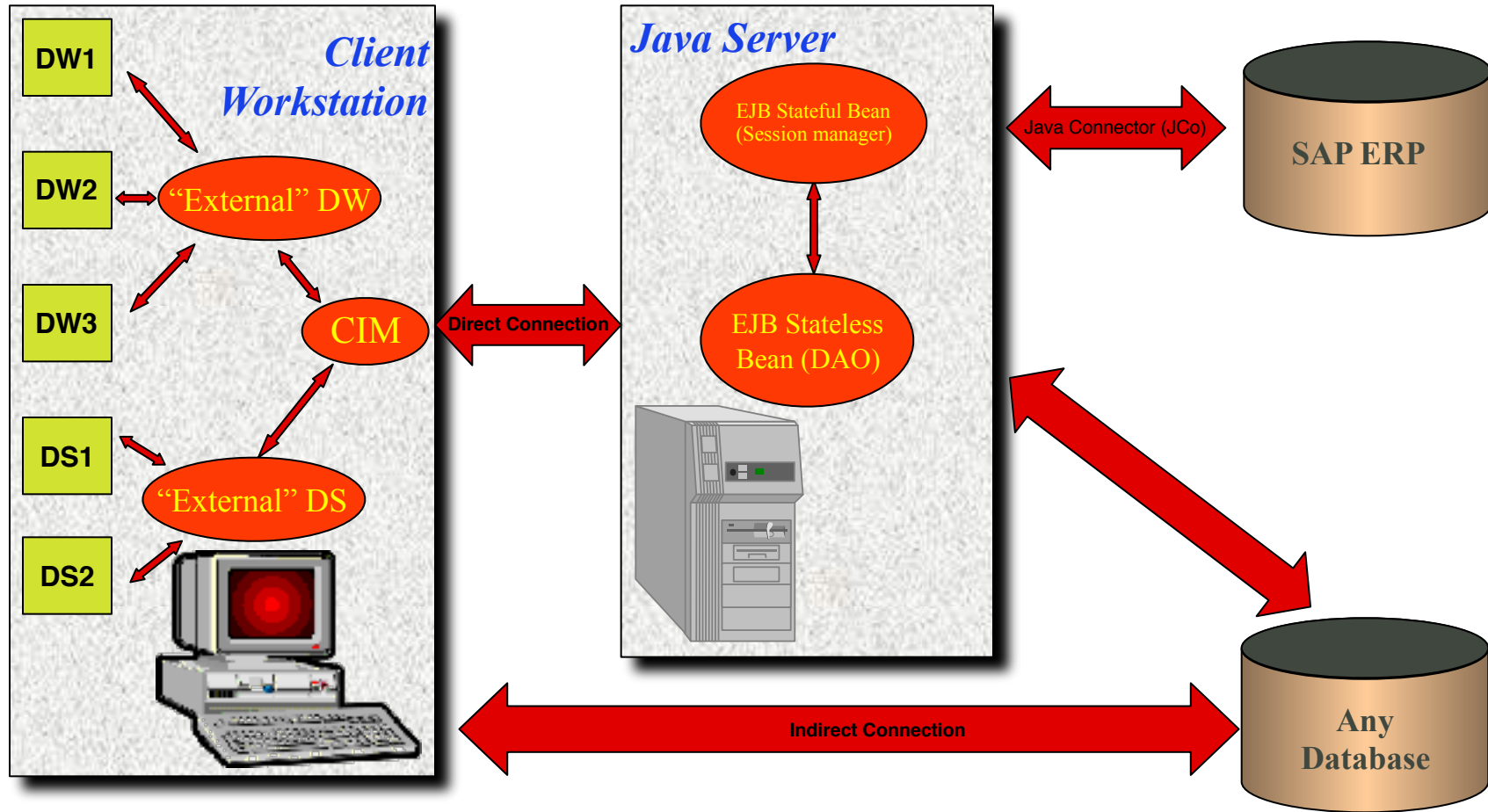
And Finally - Did I mention that it's 100% FREE ?:

- The cost of this system is 0.00 euros (approx 0.00 pound sterling).
- Strictly Open-Source.



How Does It All Work ?

PowerBuilder-SAP (very similar to 3TX)





DEMONSTRATION

It's Time for a Demonstration

- Connecting to SAP
- Retrieving data from SAP
- Sending parameters to SAP
- Updating data in SAP



Contact Details

Get more information with the following contact details:

- Email: garfield.sapbuilder@gmx.com
- GitHub: Source Code will soon be available for download on this platform
- See here for a brief demonstration of the system:
<https://youtu.be/5Efvf9o4ITY>