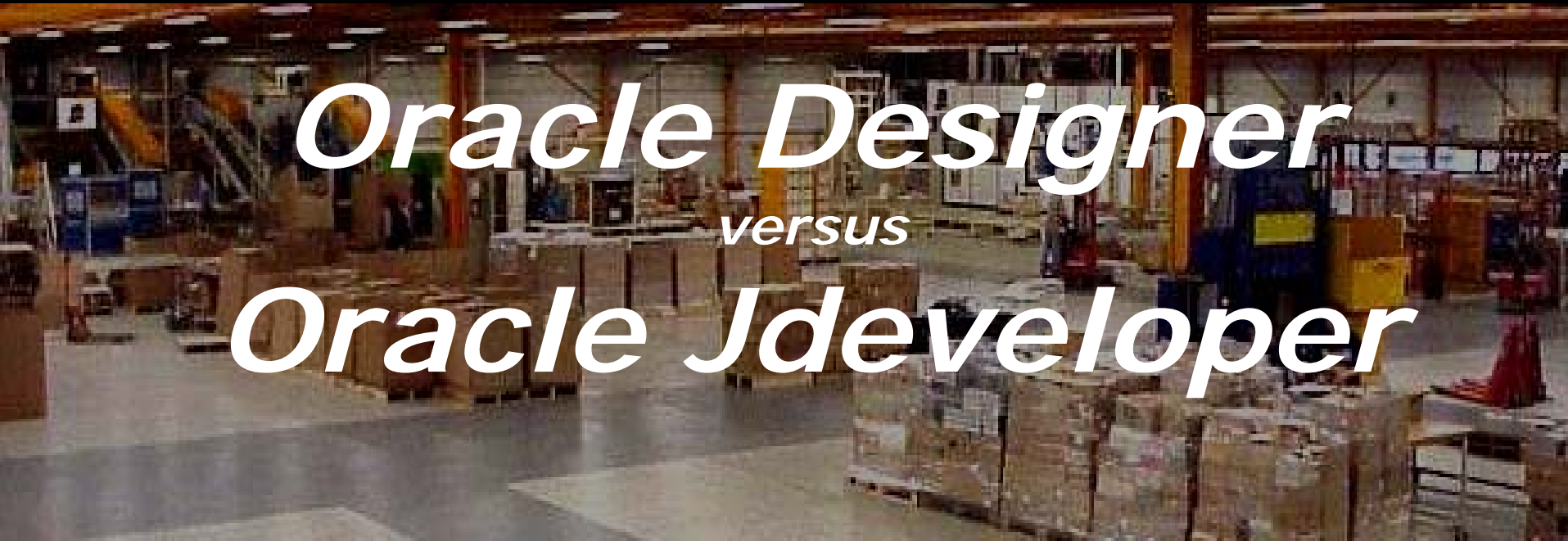


Centraal Boekhuis



Oracle Designer
versus
Oracle Jdeveloper

June, 16 2005
Jules de Ruijter

Centraal Boekhuis



- Logistic service provider, specialized in books and office supplies
- 24 * 7 operational
- 55.000.000 copies a year
- Oracle 'stronghold' since 1994
- Custom software engineering + Standard applications
- Systems development and -support: 25 pers.
- Fase in systems development:
 - More support than development

2 development environments

Oracle Designer

who uses Designer?

- Since 1995
- Up to 2003
- UpperCase & LowerCase
- Repository
- Code Generators
- Forms/Reports/PLSQL/
C/VB



Oracle Jdeveloper

who uses Jdeveloper?

- Since 1997
- Until further notice...
- LowerCase
- Version control
- Code Wizzards
- Java and other ascii files





Why compare.....

... shows in what way this organization **changes** from Designer to **Jdeveloper** saving **design information** in the process

1. Why a change-over ?
2. Why saving design information ?
3. Why to Jdeveloper ?
4. After: How (does it look like then) ?

A photograph of a large industrial warehouse with high ceilings, concrete floors, and various equipment and materials. The word "Change-over" is overlaid in large orange text on the left side of the image.

Change-over

- Designer since 1995 (after Case 5.0
- All our software sits in Designer
- Our people know Designer
- Our procedures are linked to Designer

But:

- Oracle terminates active Designer support

Oracle SoD's

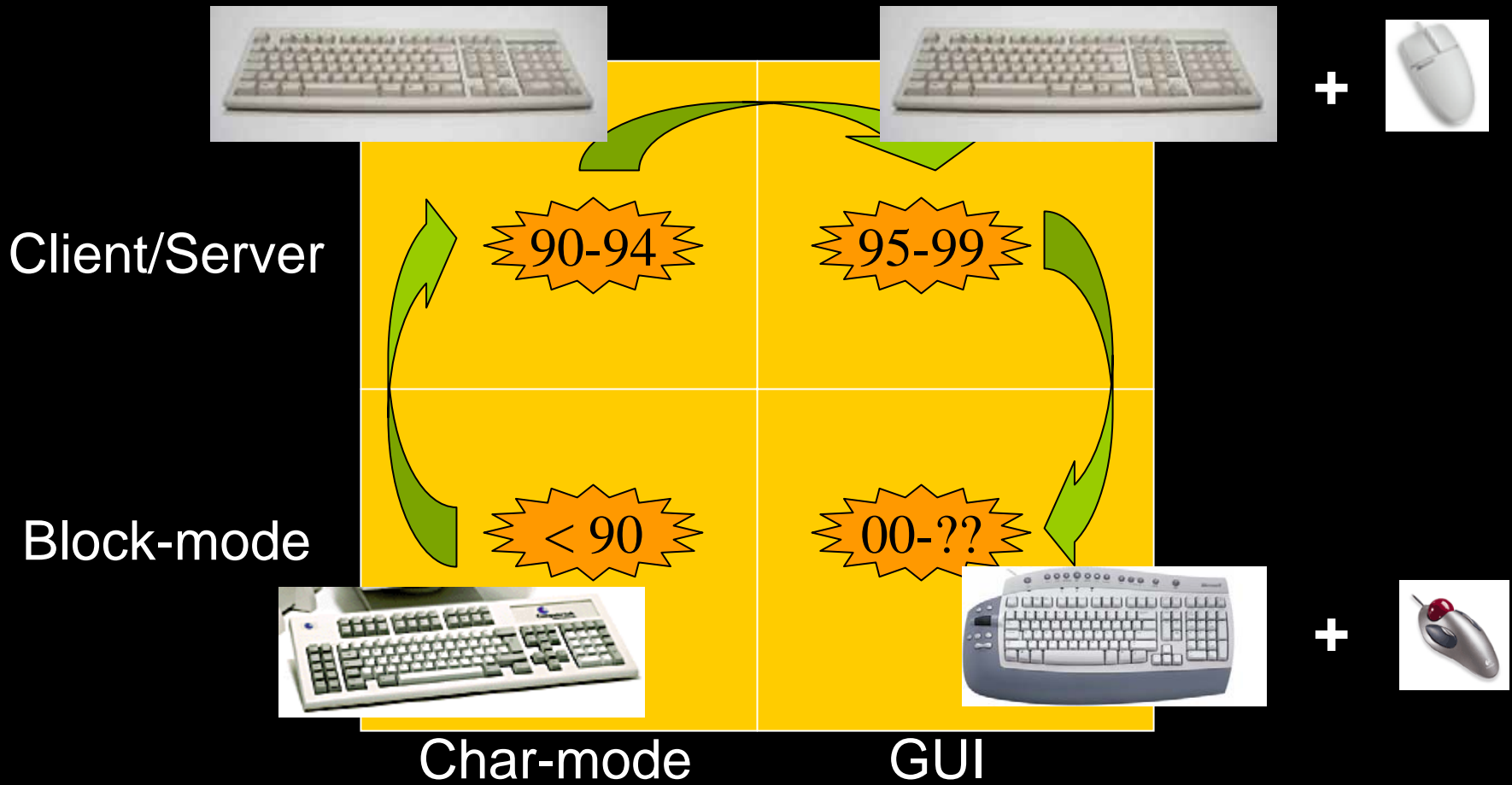
- Statements of Direction – mid 2004
 - Announces: † Designer - 2008?
 - Announces : † SCM – as of now
 - Announces focus on CVS – as of now
 - But only in Jdeveloper
- No support for new features of RDBMS 9i/10g/... (since 2001 = announcement 9i)



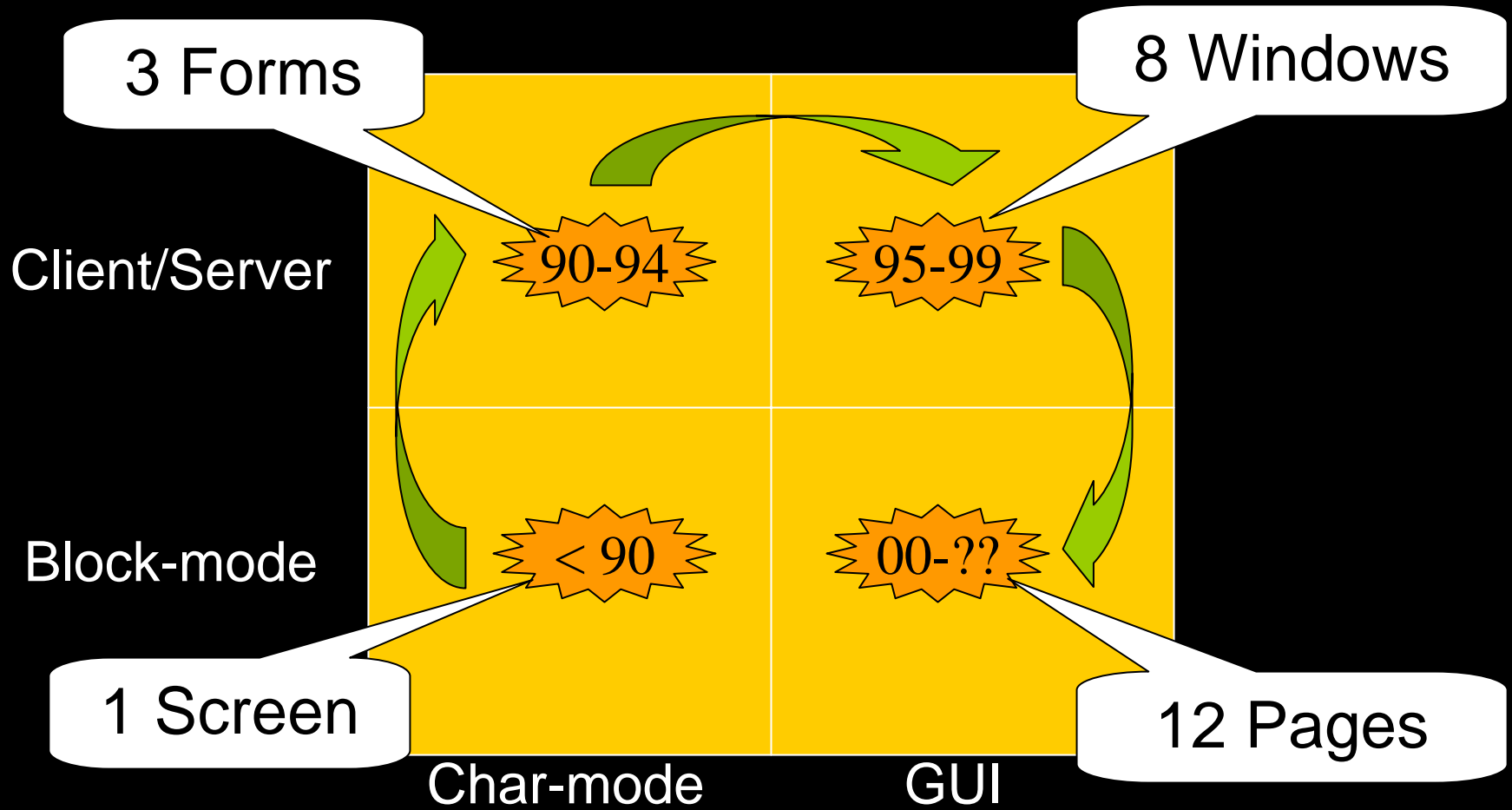
Alternatives

- No change-over
 - Wait for the termination of Designer
 - Decreasing connection to DB/AS
- Migration incl. Forms/Reports to J2EE
 - Decrease in productivity/Increase in complexity
 - Constant (??) functionality (C/S != Web)
 - Forms/Reports are no bottleneck
- Choose other(front-end) tools c.a.
 - Strategic choice ?
 - No creation of a new bottleneck
- Migrate what you have
 - Dismantle the tool, not the technology

C/S != Web



C/S != Web



**Putting 1 order
into an Order Entry System**



Dismantling the tool

- Replace the tool Designer by another tool without changing operational processes of software development and software support.
- Designer = Administration-tool (+ generators)
- Be sure to know your present workmethods
- And why you use a specific tool

Result of (re)generating

Forms30 No Case	Forms30 With Case	Forms40/45 With Case	Des 6i/9i/10g
<p>Proposition:</p> <p>Recover the costs by not changing the technology-stack.</p> <p>No updates/versions</p>		<p>x-n properties</p> <p>+</p> <p>y new</p>	<p>x-n₂ properties</p> <p>+</p> <p>y-m properties</p> <p>+</p> <p>z new</p>

Investment

NB: $y > x$

NB: $z > y$

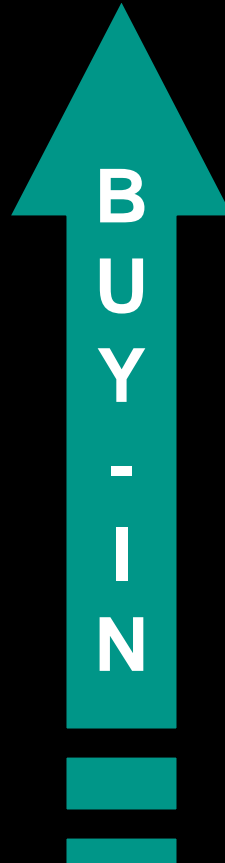
$y > n$

$m > z$

Historical position of tools

- The coherence between:

- Methodes
- Techniques
- Tools
- Objects
- Quality



Quality
S&G for objects in Designer

OBJECTS
Recordable in Designer

TECHNIQUES
Supported in Designer

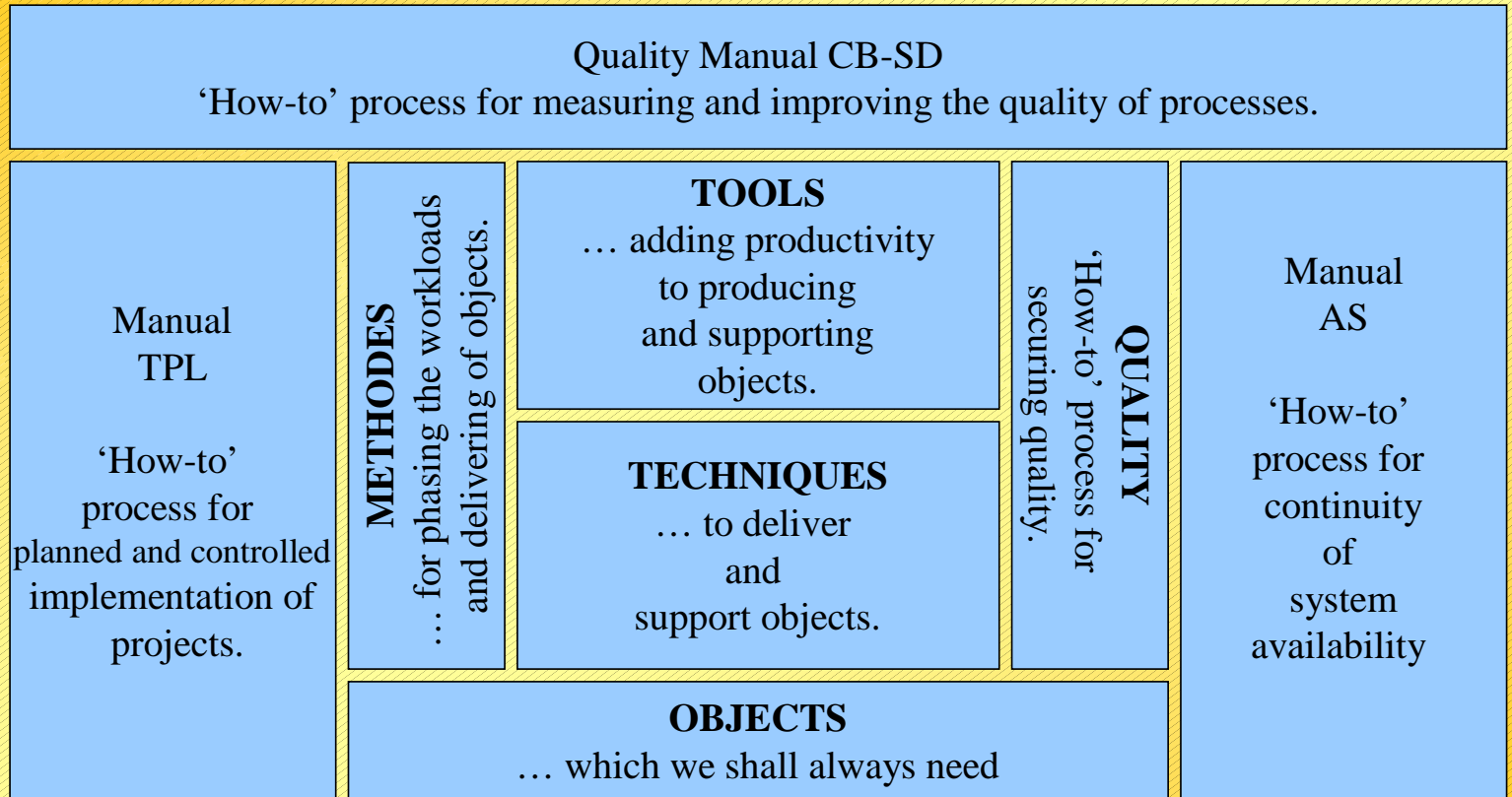
METHODES
CDM

TOOLS
Oracle Des/Dev 6i (start:Case5)

Present positioning of tools

- W
- S
- f
- A
- d

Quality system CB-SD (v1) Components



Change-over

- The change-over only concerns all software* administration
- Therefore the change-over must bring something, such as
 - Productivity, Quality, etcetera
- And should in future
 - Be open
 - Not force a specific path
 - not imply or be about a 'strategic choice'



Design information

- Securing design information

better yet:

- Securing **all** information stored in Designer
 - Explicitly, like table, business function
 - Implicitly, like shares, relations between objects

All information

- Upper Case, like:
 - Business functions
 - Entities/relationships/structural rules
- Lower Case, like:
 - Modules (front end, back end)
 - Tabela/constraints
- A multitude of software objects*
- How did we use Designer?

Use of Designer

This is the software now in Designer

Plus all relations between these objects

Datamodel

by itself that the total set

Groep	Type	Omschrijving	
Data/Business Rules	TAB	Tabel (incl overname uit Entiteit)	
	IND	Indexen	
	SR	Beperkingsregels	
	DB	Database (waar object is geïmplementeerd)	
	TRG	Triggers	
	CON	Constraints	
	SRI	SR implementatie (DB procedure/function/package)	
	SEQ	Sequences	
	DOB	Database Ontwerpbeslissing	
	Business Logic	VW	Views
PRO		Bedrijfsprocedure beschrijvingen	
DBO		DB procedures/functions/packages	
OWB		Busines Logic Ontwerpbeslissing	
BOT		Bedrijfsobject	
BFE		Bedrijfsfunctie	
BPS		Bedrijfsproces	
BET		Bedrijfsevent	
DBR		Database Roles	
PET		Procedure-event	
Interface		IB	Interface Beschrijving
		FRM	Forms-modules
		RAP	Report-modules
	MEN	Menu-modules	
	LIB	Developer Libraries	
	JCS	JCS-scripts	
	SH	Shell-scripts	
	SQL	SQL-scripts	
	BAT	BAT-files	
	CMOD	C-modules	
	BCJ	BC4J objecten (entity en view)	
	RTR	Router files	
	UIX	UIX files	
	HMR	Handle, Model en Render classes	
	CLY	Client library	
	IMG	Images	
	CSS	Stylesheets	
JCF	J2EE configuration files		

Repository Object Navigator - algemeen@des - GLOBAL SHARED WORKAREA: Navigator

File Edit View Navigator Version Utilities Tools Options Window Help

GLOBAL SHARED WORKAREA: Navigator

GLOBAL SHARED WORKAREA

- AOS
 - Assumptions
 - Business Functions
 - Business Units
 - Constanten
 - Datastores
 - Diagrams
 - Documents
 - Domains
 - Entities
 - Languages
 - Modules
 - Oracle Databases
 - PL/SQL Definitions
 - Preference Sets
 - Preferences
 - Problems
 - Process Events
 - Sequence Definitions
 - Storage Definitions
 - Synonyms
 - Table Definitions
 - AOS_AO_AFREKEN_HOEVEELHEDEN
 - Preferences
 - PL/SQL Definitions To(PL/SQL Module Table Usage)
 - Modules To(General Module Table Usage)
 - Columns
 - Check Constraints
 - Primary Keys
 - Unique Keys
 - Domain Key Constraints
 - Foreign Keys
 - Indexes
 - Synonyms
 - Triggers
 - Assumptions
 - Usages
 - Inclusions
 - AOS_AO_ONTVANGST_EENHEDEN
 - AOS_AO_ORDBRACHT_CLUSTER

Groep	Type	Omschrijving	
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		FRM	Forms-modules
	RAP	Report-modules	
	MEN	Menu-modules	
	LIB	Developer Libraries	
	JCS	JCS-scripts	
	SH	Shell-scripts	
	SQL	SQL-scripts	
	BAT	BAT-files	
	CMOD	C-modules	
	BCJ	BC4J objecten (entity en view)	
	RTR	Router files	
	UIX	UIX files	
	HMR	Handle, Model en Render classes	
	CLY	Client library	
	IMG	Images	
CSS	Stylesheets		
JCF	J2EE configuratie files		
IOB	Interface Ontwerpbeslissing		
XSD	Webbservice beschrijving		
DOT	Database Object Type		

2	Status			
3	klaar			
4	een package is 1 geheel, inclusief alle inliggende componenten			
5	(opsplitsen geeft weliswaar gedetailleerder modulenetwerk)			
6	Selectie			
7	Alle entries in de groep PL/SQL Definitions die voldoen aan de voorwaarde:			
8	- met als Type: 'Procedure', 'Function', 'Package'.			
9	- behalve die beginnen met '~'			
10	Relaties (omkering impliciet aanwezig)		Opmerking	
11	DBO	calls	TAB	
12	DBO	calls	SEQ	
13	DBO	calls	DBO	deze relatie heeft properties in Designer
14	DBO	calls	VW	
15	DBO	calls	JCS	
16	DBO	called by	IND	
17	DBO	called by	TRG	
18	DBO	called by	VW	
19	DBO	called by	DBO	
20	DBO	called by	LIB	
21	DBO	called by	FRM	
22	DBO	called by	SQL	
23	DBO	called by	CMOD	
24	DBO	called by	JCS	
25	DBO	called by	RAP	
26	DBO	implements	PRO	
27	DBO	includes / included by	IND	
28	DBO	includes / included by	TAB	SRI is onderdeel van DBO
29	DBO	calls	OBT	
30	DBO	database	DB	

32	Properties	ja/nee	Tagnaam	Opmerking
33	create text	j	<cbcode>	
34	purpose	j	als tekst in cbcod	
35	description	j	<cbdoc>	
36	description van arguments	j	als comment in create text	
37				
38	implementation name	n		is al onderdeel create statement
39	type	n		kun je in de create text zien
40	implementation	n		is relatie geworden
41	Deterministic	n		via de create text
42	name	n		
43	short name	n		
44				declare

45	Opmerkingen			
	Tevens ontwerp voor SRI. Er is voor gekozen om een klein deel			

AOS

P_AOS_SR_D14

P_AOS_SR_D14

ASPC - Controle geen beschadigen b

Procedure

p_aos_sr_d14

Public

Not Started

No

Average

Default Behavior

Default Behavior

Default Behavior

Default Behavior

No

declare



Where does it lead to?

- Consequences for version control
 - Version control using CVS (OSS)
 - All sources on OS level
 - Working from a file system
 - All sources are an ascii file (except Form, Report, Menu)
- Demands to a modular network
 - Maintaining relations between objects
 - Fast search/find
 - Not standard in Jdev

What does it look like?

```
dbo_xml.txt - Kladblok
Bestand Bewerken Opmaak Help

set doc off
--<cbcode>
CREATE OR REPLACE PROCEDURE P_BEP_MOG_PTWG
(P_PRODUKTIE_DAT IN DATE -- Datum waarvoor productie scheduling wordt uitgevoerd (=property description van argu
)
IS
/*
Bepaal mogelijke toewijzingen voor geplande productie (=property purpose)
*/
declare
/* Declaratie cursor */
cursor c_vpgl
is
select min(
max(
count
from v_pss
where vpgl
and not exist
--> W6
--< W6
;
cursor c_vpgl
is
--> W00704_5
select min(
max(
from ( select
from
where
and
and
and
--> W6
--< W6
)
where rownum
--< W00704_5
;
/* Declaratie
pl_parameternaam
pl_min_aant_gc
pl_max_aant_gc
pl_tot_aant_gc
pl_aant_ranges
```

```
dbo_xml.txt - Kladblok
Bestand Bewerken Opmaak Help

--> W3
end if;
--< W3
exception
when e_parameternaam_ontbreekt
then
raise_application_error ( -20250
|| 'PSS-00043 p_bep_mog_ptwg: '
|| pl_parameternaam
|| ' is leeg.'
);
end;
--</cbcode>
--<cbdoc>
/*
Omschrijving
-----
Functioneel ontwerp:
-----
Doel module
-----
Bepalen van de mogelijke verwerkingsplaatsen voor de geplande
distributie opdrachten regels. Hiervoor worden de opdrachten in groepen
verdeeld en per groep verwerkt.
Triggers
-----
zie Modules - Called By
Toelichting module
-----
Het aantal geplande distributie opdrachtregels is dusdanig dat de
verwerking hiervan parallel uitgevoerd moet worden. In deze module
worden de geplande distributie opdrachtregels verdeeld in ranges en
wordt voor iedere range een aparte JCS-job opgestart voor het
verwerken van de opdrachten in die range.
Bij het bepalen van de ranges moet er voor gezorgd worden dat alle
geplande distributie opdrachtregels die behoren bij één distributie
opdracht in dezelfde range komen.
Het indelen in ranges wordt gedaan aan de hand van de volgende twee
parameters:
- minimaal aantal geplande distributie opdrachtregels per range
- maximaal aantal ranges
Het indelen in ranges loopt in de volgende stappen:
1) Bepalen van hoogste en laagste distributie opdracht volgnummer van
de geplande distributie opdracht regels en totaal aantal geplande
distributie opdracht regels dat verwerkt moet worden.
2) Bepalen van het aantal ranges door het totaal aantal geplande
distributie opdrachtregels te delen door het minimaal aantal
geplande distributie opdrachtregels per range. Hierbij geldt de
beperking dat het aantal ranges nooit groter mag worden dan het
```



Jdeveloper

- Why Jdeveloper (1)
 - We have it and been using it (J2EE)
 - CVS is integrated
 - It is 'the way to go' – according to Oracle
 - Investments are made
- Why Jdeveloper (2)
 - It offers a modern development environment
 - It is more user friendly
 - It is more productive
 - It is entirely open – not proprietary
- Why Jdeveloper (3)
 - We could have used MS Visual SourceSafe

Score Designer

- Requirements of Centraal Boekhuis of modern development environment:
 - Good supporting probabilities for deployment environment (9i, 10g, iAS)
 - Excellent support of all software*
 - Knowing which version you have/under construction
 - Minimal administrative overhead
 - Useful generating of software
 - High productivity

Designer

No

Reasonably

'No'

No

Yes

Reasonably

Score Jdeveloper

- Requirements of Centraal Boekhuis of modern development environment:
 - Good support possibilities deployment environment (9i, 10g, iAS)
 - Excellent support of all software*
 - Knowing which version you have/under construction
 - Minimal administrative overhead
 - Useful generating of software
 - High productivity

Jdev + CVS

'Yes'

Yes

Yes

Yes

No

Yes



Situation

... shows in what way this organization **changes** from Designer to **Jdeveloper** saving **design information** in the process.

- Designer is an administrative tool
- Forms/Reports are development tools
- Look upon it as moving the administration



Status

- ✓ Define all objects used
- ✓ Describe the way we use Designer
- ✓ Describe how the source files will look like
- ✓ Expand Jdeveloper-functionality
- ✓ Write migration scripts and such
- ✓ Testing (1) – development environment
- Testing (2) – version control
 - Testing (3) – pilot
 - Migration of all software/instruction of users
 - Implementation



Demo

- Any Questions?