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Generic software application enhancement and development framework

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service oriented architecture (SOA)

Technical concept of a generic 4 layer data model based on Organizational Data, Characteristics Data, Product List View and Basic View.
Products and or Service are represented by dynamic runtime objects.

1 SOA - Scope

shared software services associated with high complex organizational structures and usage types

Enhancements of complex used standard components
- preconfigured processes / applications
- parallel development on same enhancements / components
- remove of “hard-coded” organizations, characteristics etc.

general development of configurable applications

generic, efficient and high flexible customizing and configuration framework

Development of reusable, redefine able, version able software applications

Process / Service related approach (SOA)

2 SOA Layer model

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- Process view
Keys: Organizational Structure
Company Code + Sales Org.

Which Organization is using that Process?
Which Service is assigned to that Organization?

- Service view
Keys: Application Characteristics
Order Type + PM Activity Type

Which Characteristic is using this Service?
Which Product List represents this Service?

- Product list view

Which Products represents the Product List?
How is a Product defined?

- Basic view
Runtime Objects + Configuration Settings

2 SOA Layer model – Process View

- Process view

Keys: Free defined Organizational Structure (hierarchal)

Company Code + Sales Org.

Which Organization is using this Process?
Which Service is assigned to that Organization?

Process ID	Org. 1 (free)	Org. 2 (free)	Service ID	Active?
P10001234	*	*	S10001234	X
P10001234	1000	*	S10001235	X
P10001234	1000	S101	S10001236	X
…				

simplified Process view – Service Filter conditions based on Organizational Structure

-> highest Priority of that record with the most details

2 SOA Layer Model – Service View

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- Service view

Keys: Free defined Application Characteristics

Order Type + PM Activity Type

Which Characteristic is using this Service?
Which Product List represents this Service?

Service ID	Char. 1 (free)	Char. 2 (free)	Product List ID	Class Name	Tabname	Srtfield
S0001234	*	*	L0001234	Z_GEN_S	ZTAB_0	100000
S0001234	YZZZ	*	L00012341	Z_GEN_S1	ZTAB_1	100001
S0001234	YZZZ	ZS	L00012342	Z_GEN_S2	ZTAB_2	100002
S0001235	YXXX	ZM	L00012341	Z_GEN_S1	ZTAB_1	100001

simplified Service view – Filter conditions based on Application Characteristics

-> highest Priority of that record with the most details

2 SOA Layer Model – Product List View

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- Product List view

Which Products represents the Product List?
How is a Product defined?

Product List ID	Product ID	Sequence	Service type	Dest.	Class Name	Tabname	Srtfield
L0001234	PR0012340	1	RFC	LOCAL	Z_CLASS_1	ZTAB_0	200000
L0001234	PR0012341	2	ABAP	LOCAL	Z_CLASS_2	ZTAB_1	200001
L0001234	PR0012342	3	HTTP	DEST_C	Z_CLASS_3	ZTAB_2	200002
L0001235	PR0012350	1	RFC	DEST_X	Z_CLASS_1A	ZTAB_0	200000
L0001235	PR0012351	2	FTP	DEST_Y	Z_CLASS_5	ZTAB_1	200001

simplified Product List View – sequence of Products

2 SOA Layer Model – Runtime objects

- Workbench Objects

Application Enhancements Points

Bundling of required
Enhancements into 1 Object

Mandatory Usage of inherited
Objects and or Interfaces to create
dynamic runtime objects

ZCLASS_0	
METHOD_PRE	Enhancement A
METHOD_DO	Enhancement A
METHOD_POST	Enhancement B

ZCLASS_1:
inherited from ZCLASS_0,
redefining METHOD_POST

ZCLASS_1	
METHOD_PRE	Enhancement A
METHOD_DO	Enhancement A
METHOD_POST	Enhancement B

2 SOA Layer Model – Configuration

- detailed Configuration in Cluster Table

Process related configuration data can be stored in database
(TABNAME, SRTFIELD)

IMPORT FROM DATABASE …

preconfigured business scenarios — use that order type, replace value, don't process step A, …

configured user interfaces — normalized structure for field properties processing

2 SOA Layer Model – Options

Data Model Enhancements

Implementation of exception processing
-> Process and Service replacement

Dynamic field Lists for Filter Processing
-> Use of “Select-Options”

service selection UI

True Hierarchy Resolution

Licensing, Valid to …

3 SOA Implementation

Each Process implementation requires a separate Specification.

- LUW, Locks, Interfaces, Structures, Organizational View, Characteristic View, Methods, global Data, Enhancement Points, Protocols …

Don't:

- Maintain Master-Data (or similar Attributes) in the Configuration Cluster. This would reduce the Reuse ability.
- It seems to be better to separate the processes for Header and Items (Don't mix up different processes).

Restrictions:

- Active Standard Enhancements with filter Functionality, Menus, multiple Use

Thank you for your attention!

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