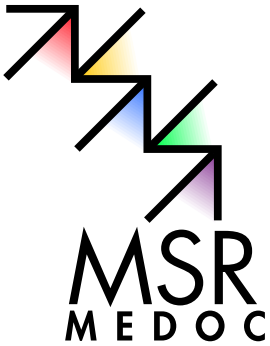
A Generic Algorithm for Merging SGML/XML Instances



MSR-MEDOC, Gerald Manger, BMW Group

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Introduction

Companies

MSR-MEDOC [MEDOC]

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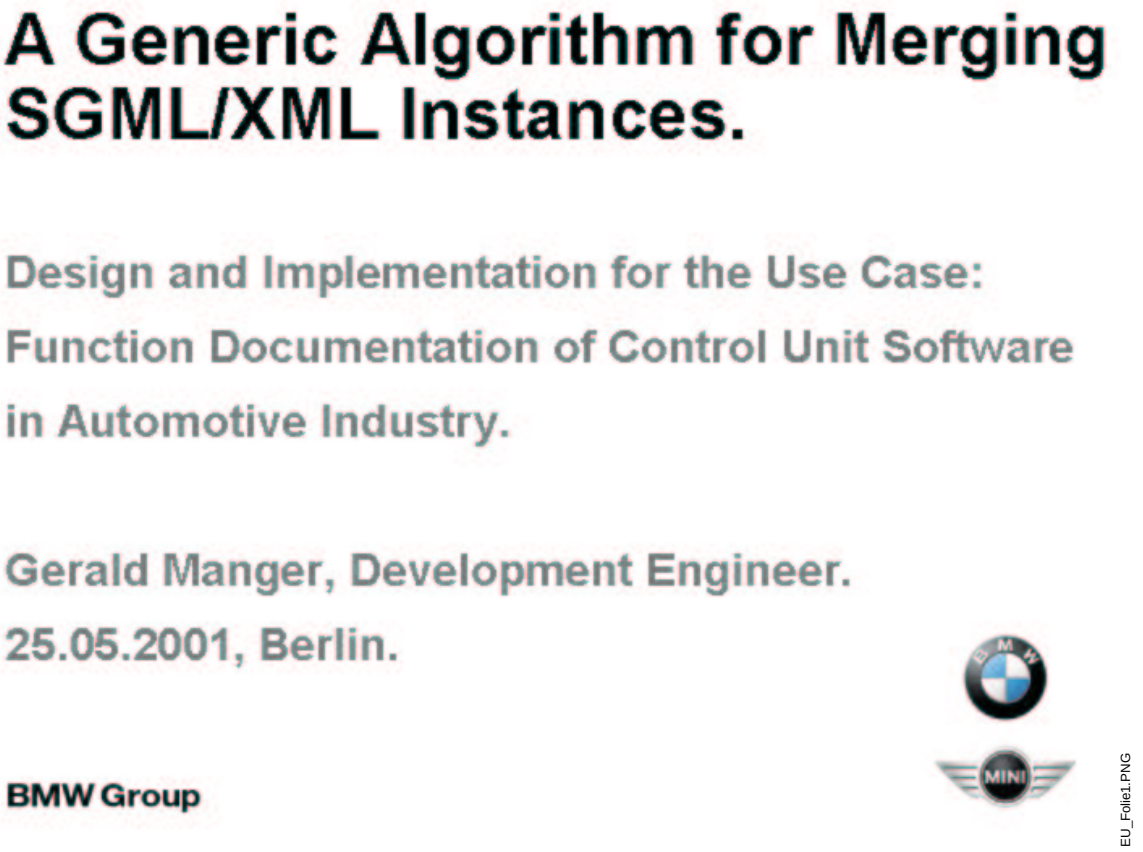
Gerald Manger, BMW Group			

Version Information

Document Part	Editor			
	Company	Version	State	Remarks
1 RD 2002-11-03 For details refer to nr. 1, Page	Gerald Manger, BMW Group			
	MEDOC			

1 Presentation



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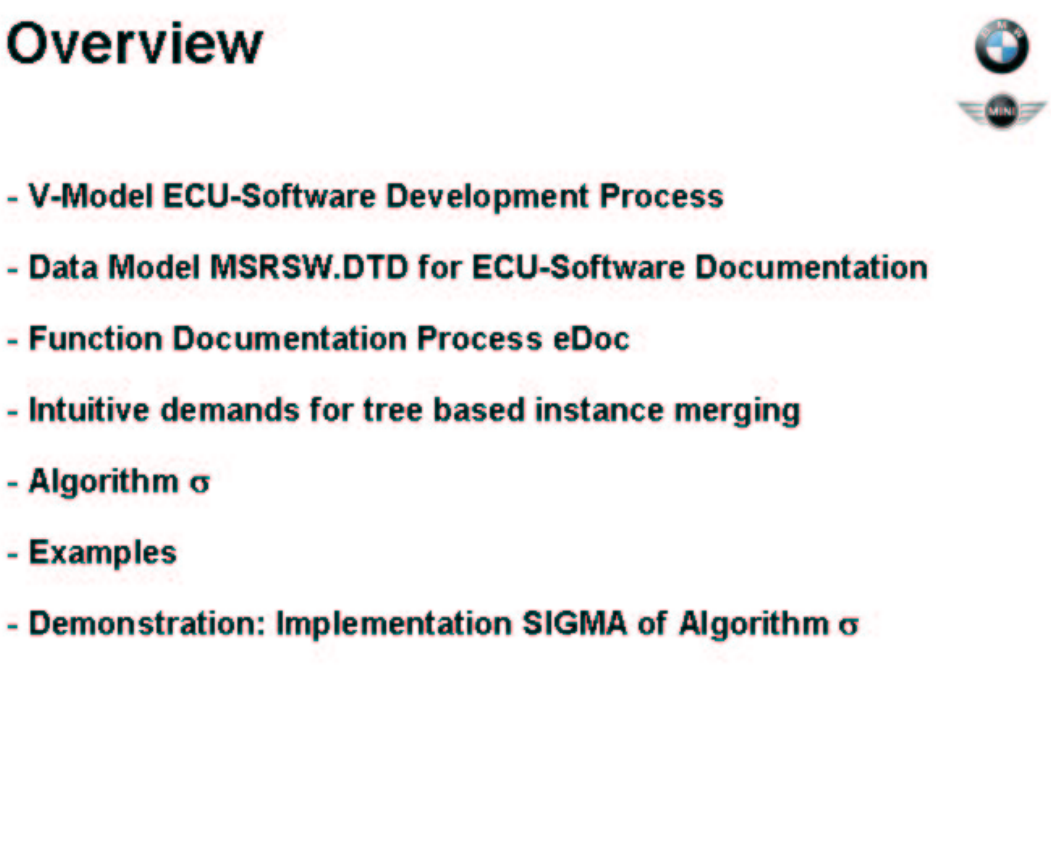

EU_Folie2.PNG

Figure 2: Folie 2

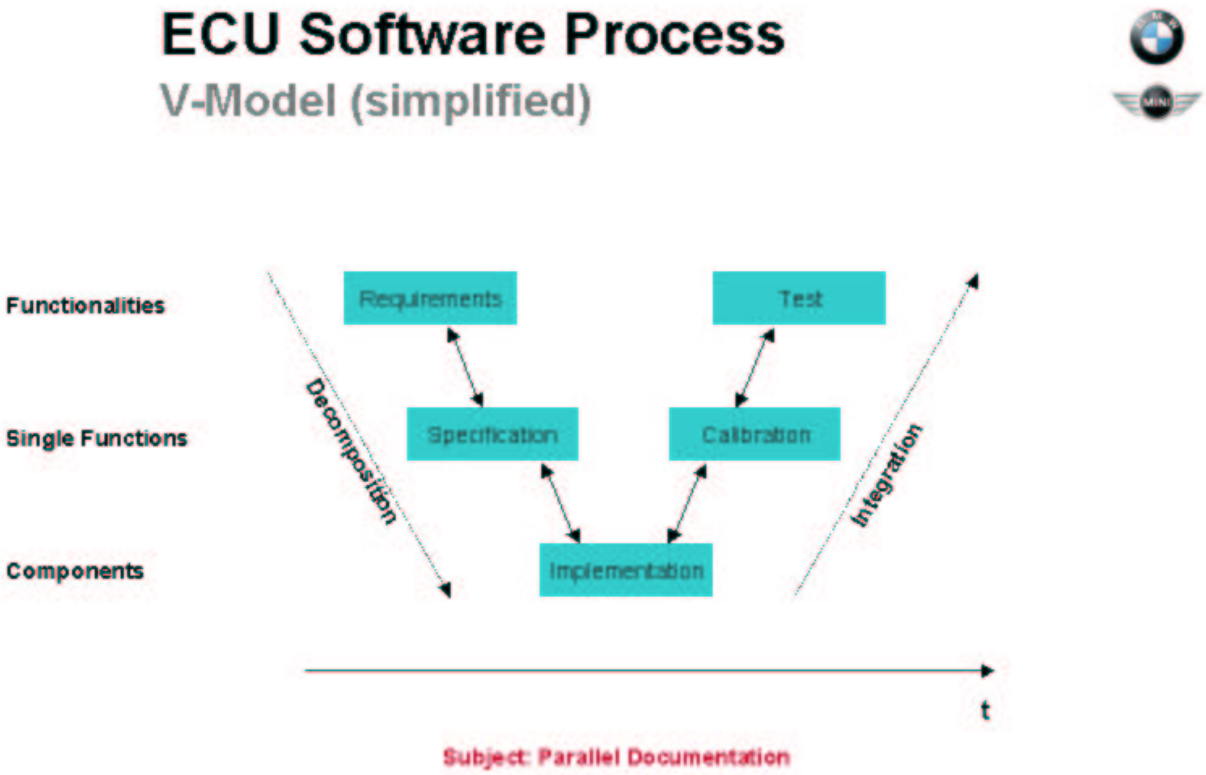

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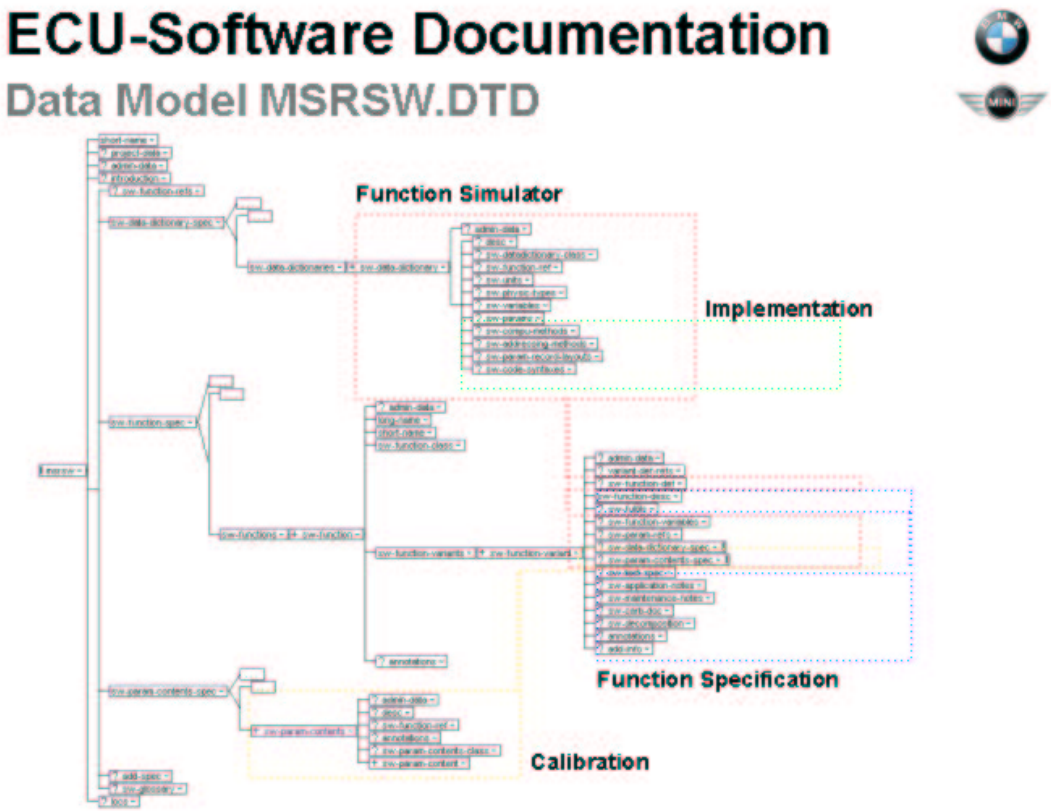
Figure 3: Folie 3



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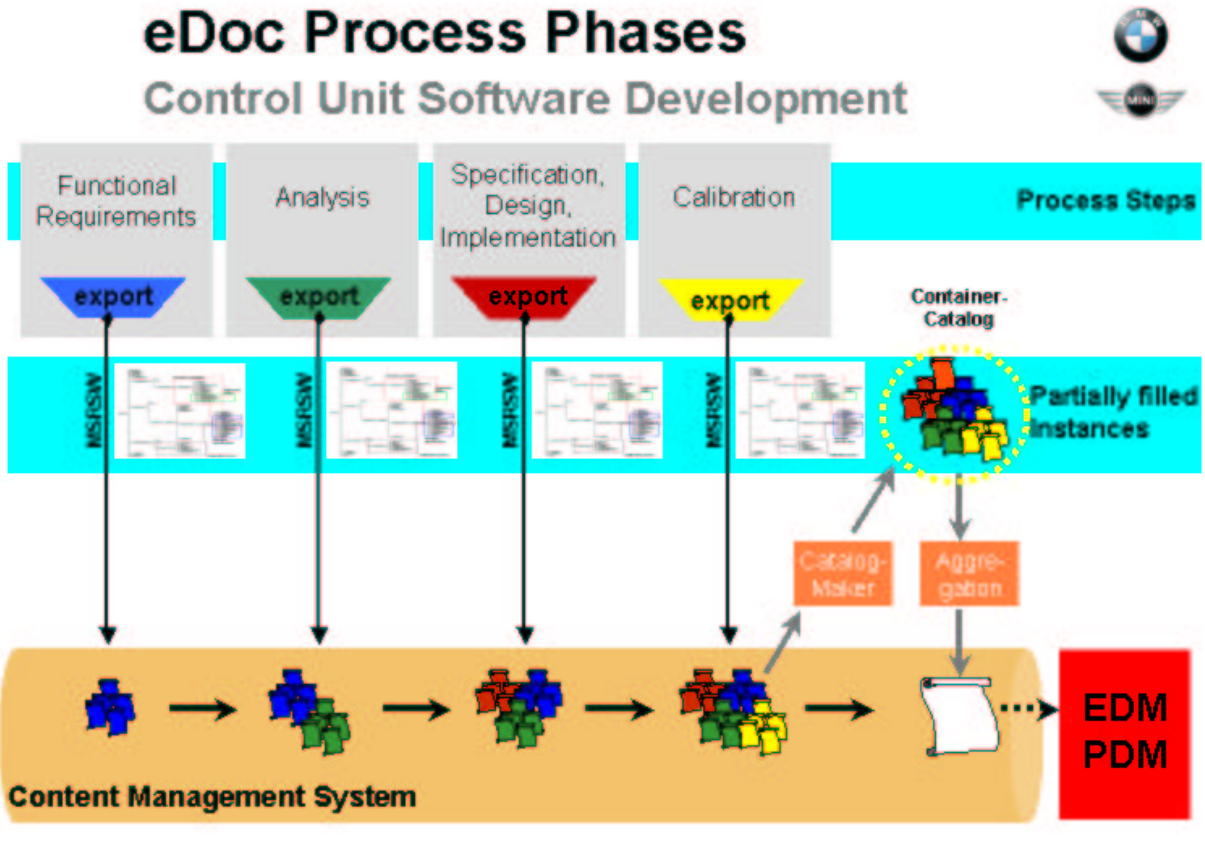

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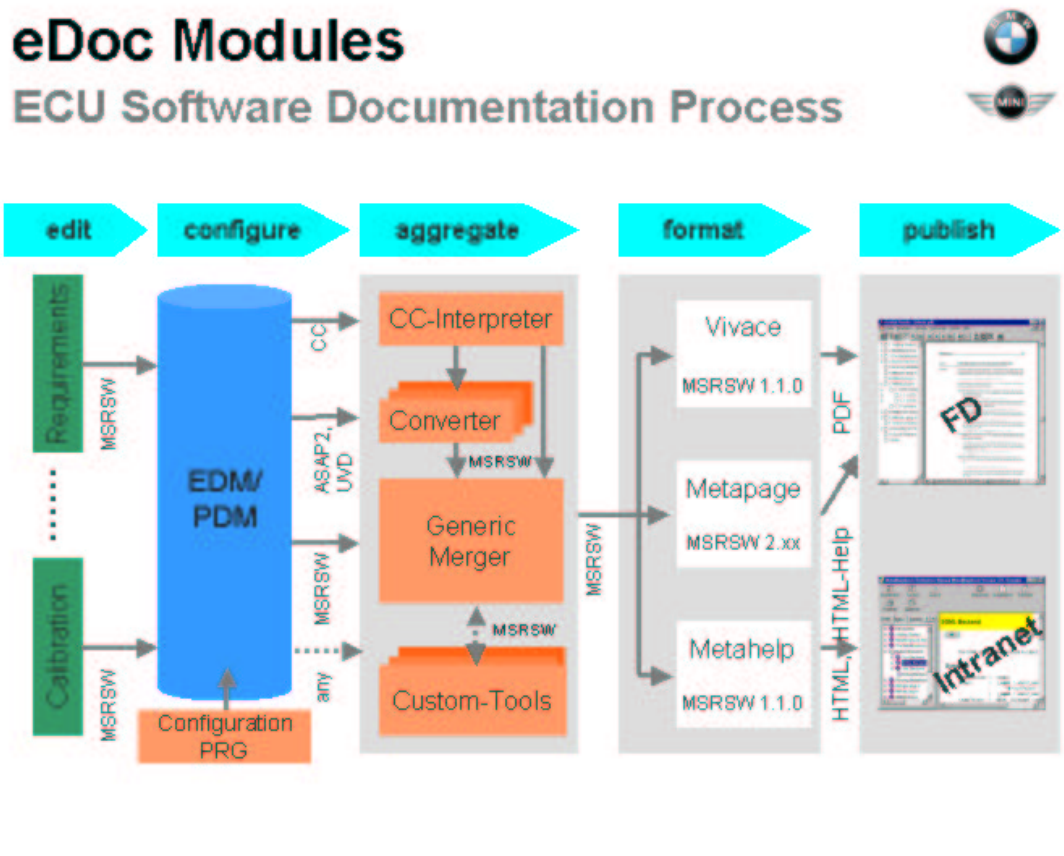

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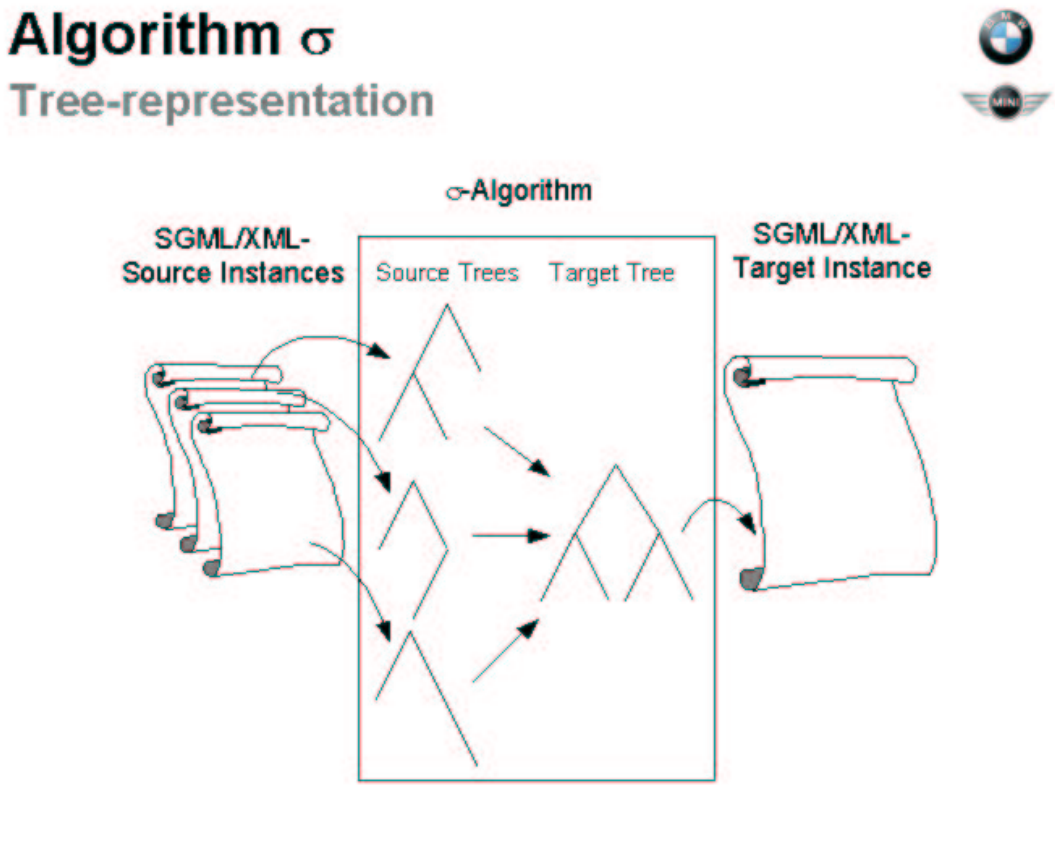

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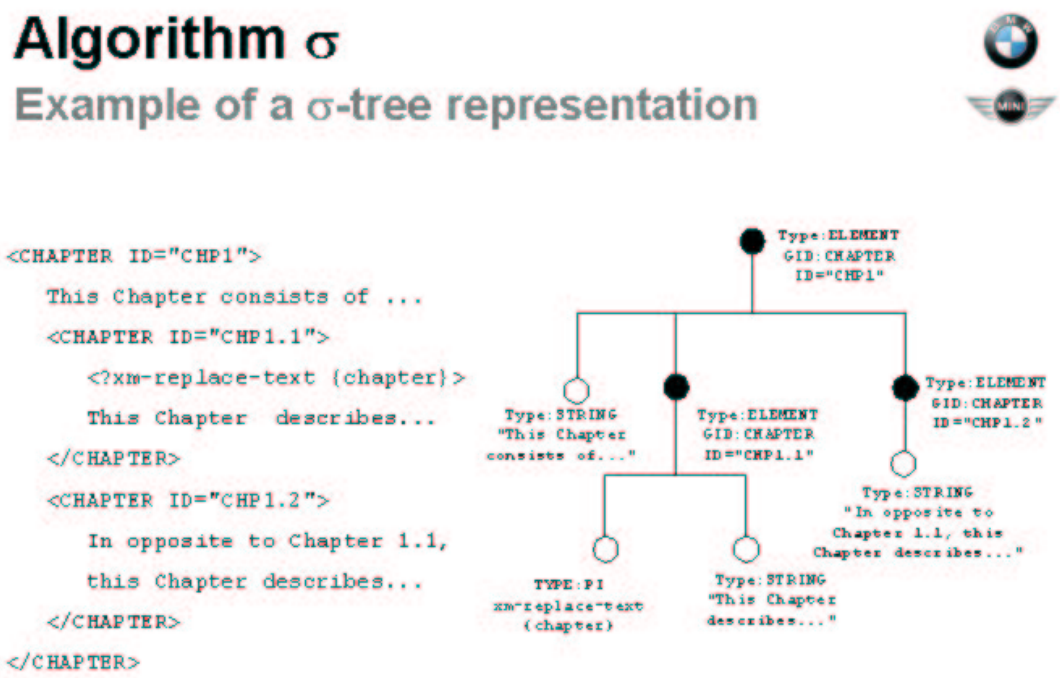

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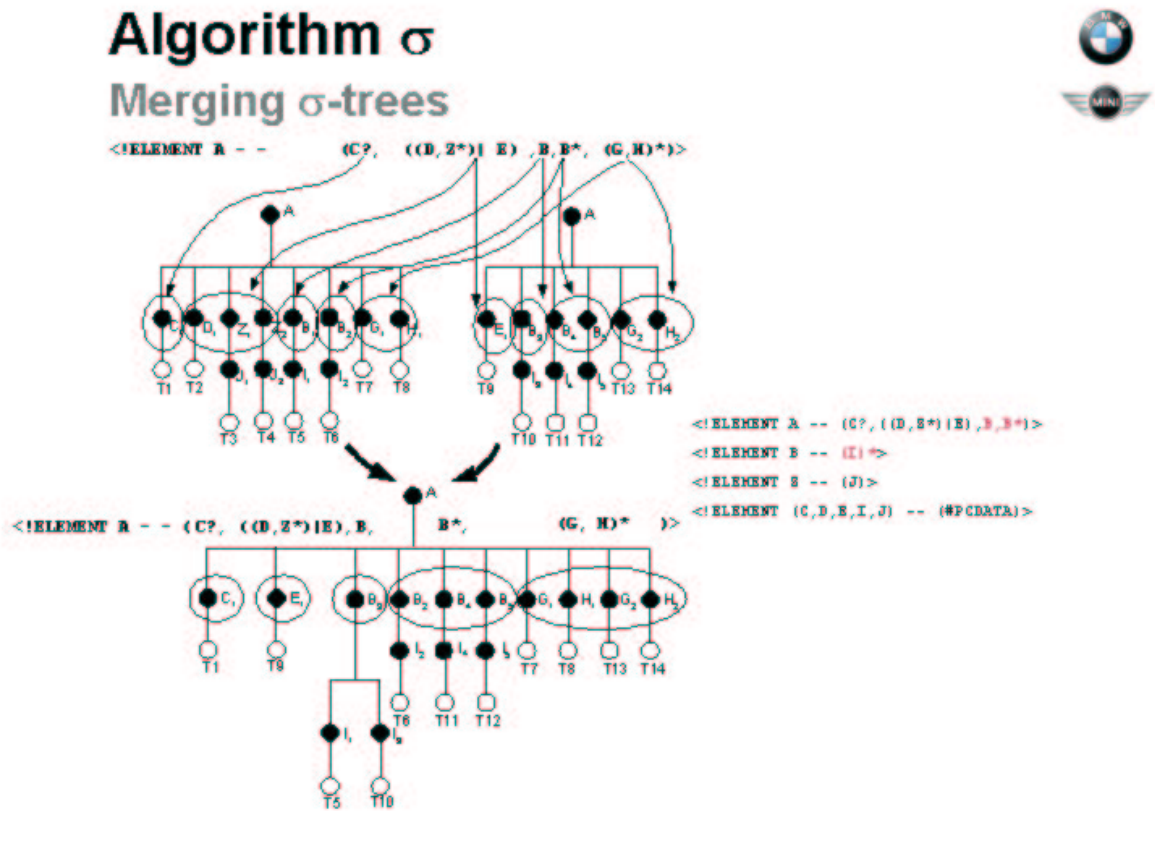

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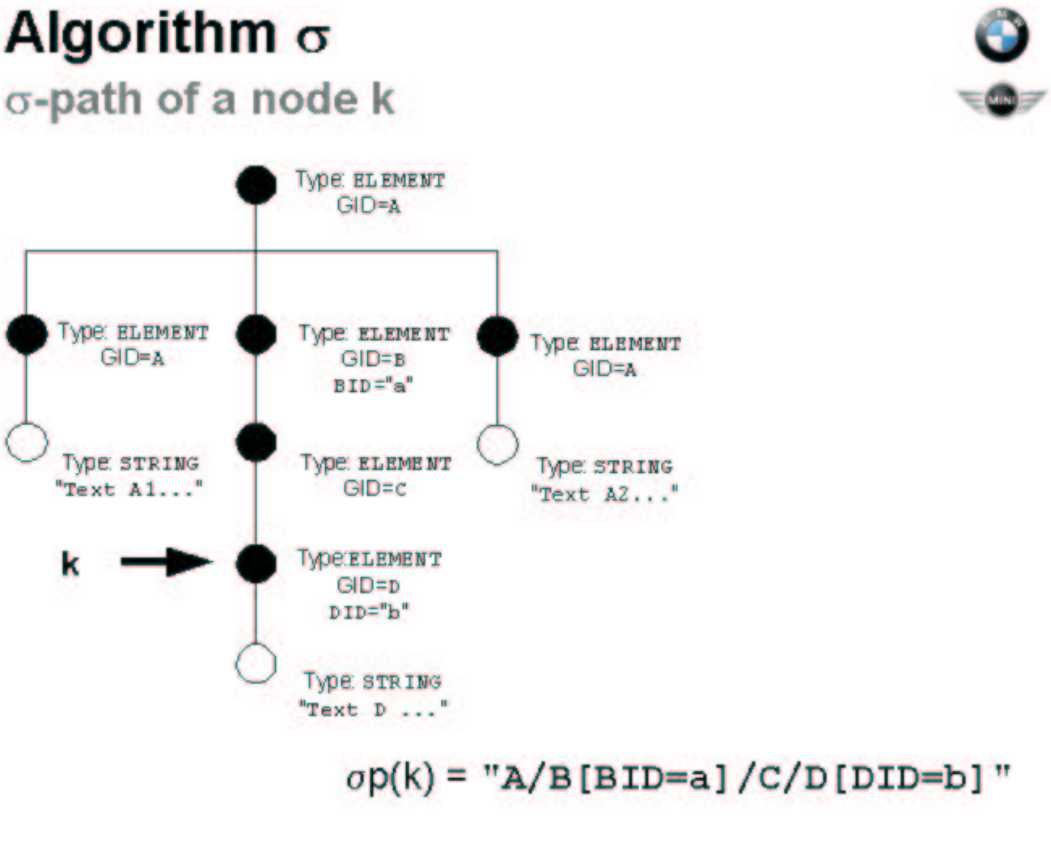


Figure 10: Folie 10

Algorithm σ

Definitions

δ: actual Document Type Definition (DTD) all sources are valid instances of

gid(k): returns the generic identifier (gid) of a node k of type `ELEMENT`

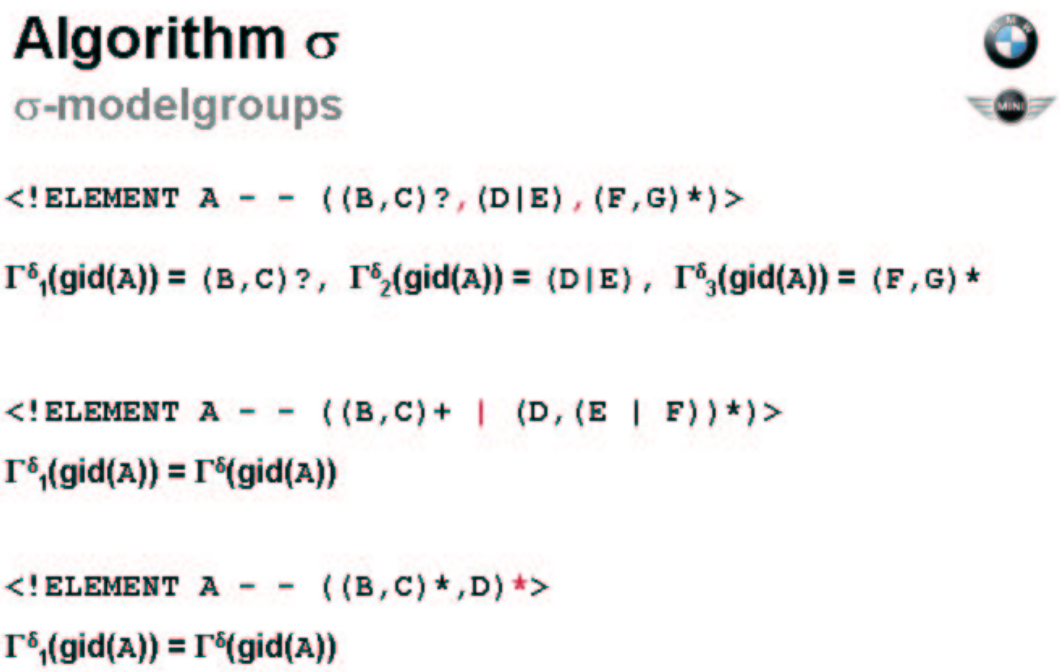
$K^{\delta}_{\sigma p(k)}$: List of all σ-source nodes having the same σ-path as k

Γ^{δ}(gid(k)): content model of the element corresponding to node k

Γ^{δ}_{m}(gid(k)): σ-modelgroup no. m in content model Γ^{δ}(gid(k)) of node k

EU_Folie11.PNG

Figure 11: Folie 11



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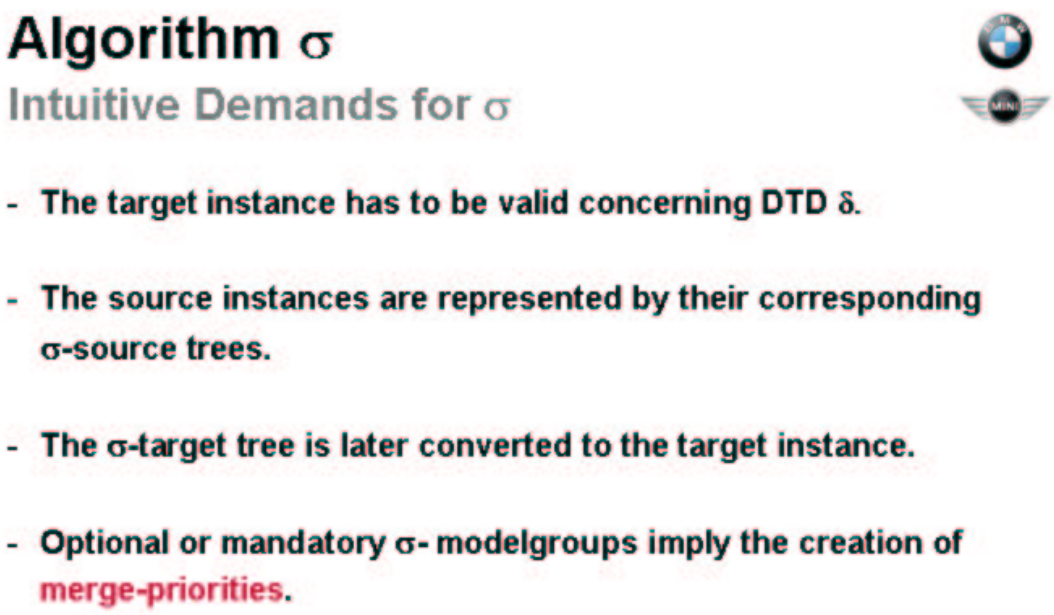

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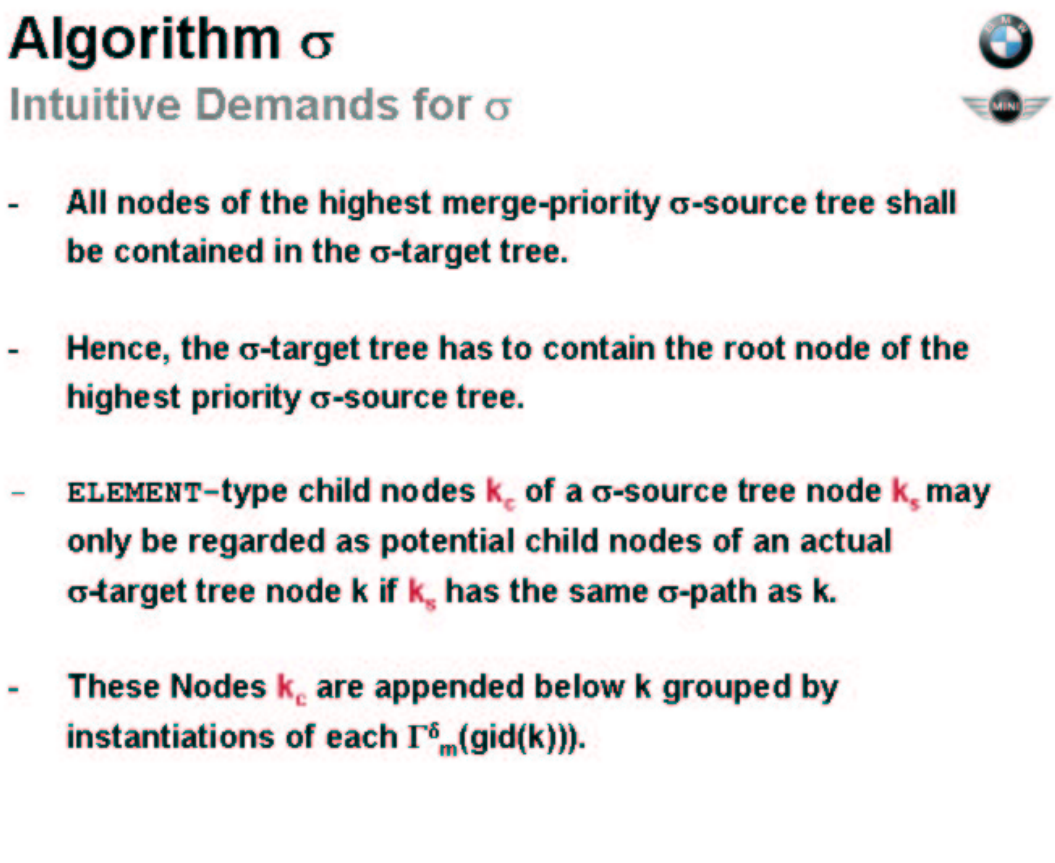

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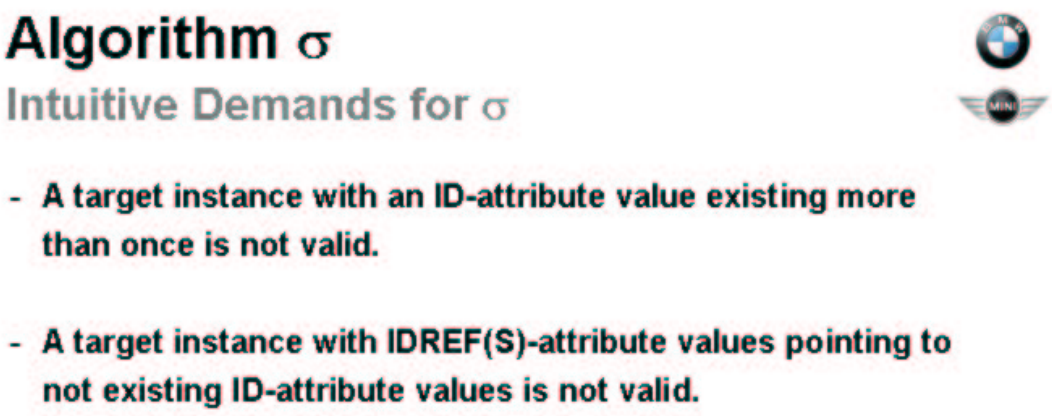

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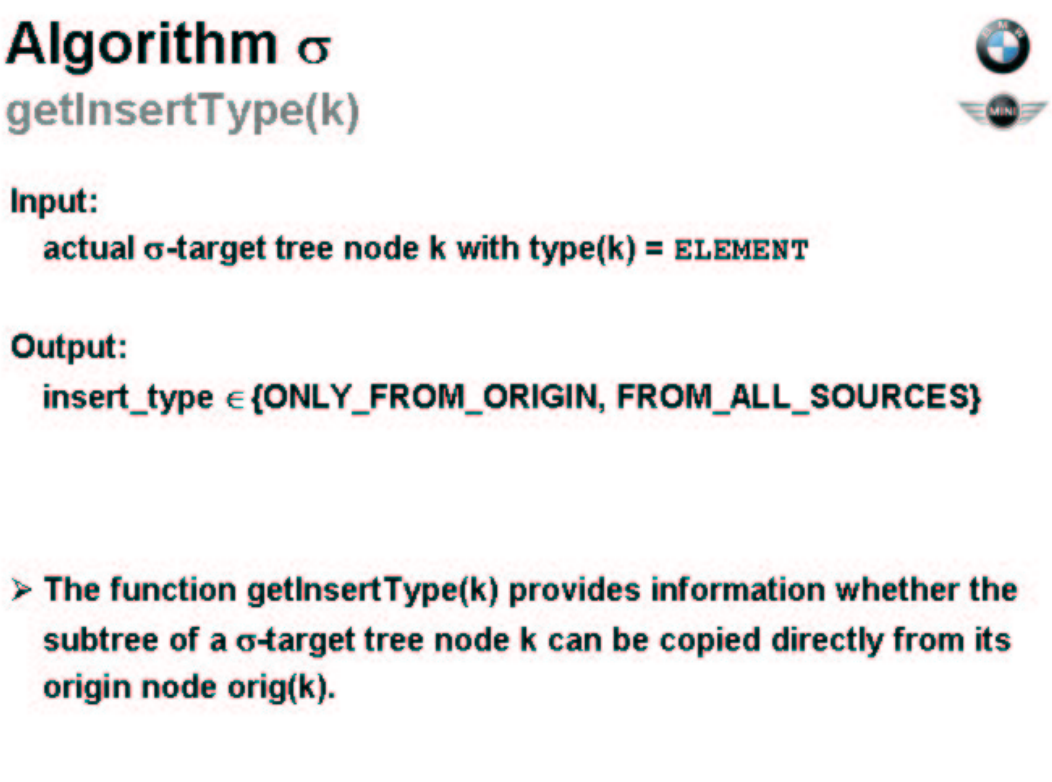
Figure 15: Folie 15



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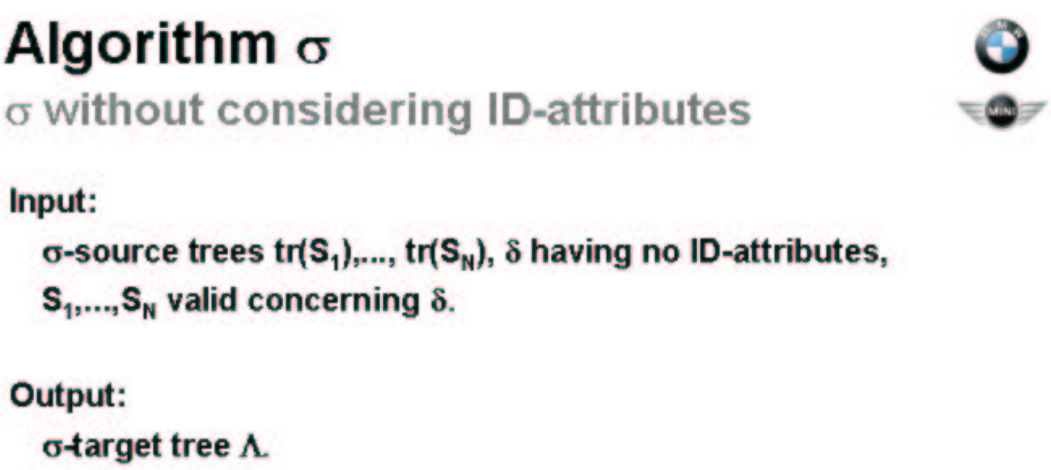


EU_Folie17.PNG

Figure 17: Folie 17

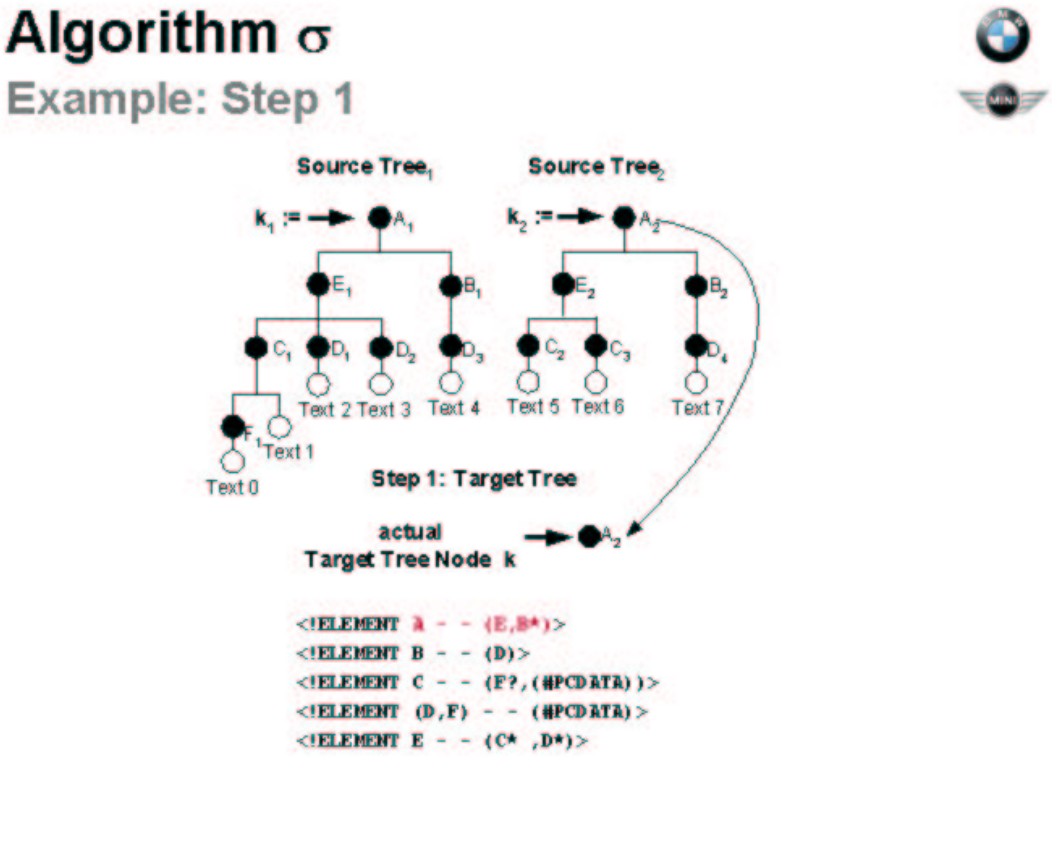
Algorithm σ

σ without considering ID-attributes

1. Λ := root(tr(S_N))
2. k := root(tr(S_N))
3. Traverse Λ top-down, left-right. Let k be the actual σ-target tree node.
   1. IF type(k) ∈ {PI, STRING, COMMENT} THEN
      1. Copy all contents (i.e. the node text) of orig(k) beneath k.
      2. Proceed traversing Λ top-down, left-right.
   2. ELSE
      1. IF getInsertType(k) = ONLY_FROM_ORIGIN THEN
         1. Append subtree of orig(k) beneath k.
         2. Stop traversing the subtree of k. Proceed traversing Λ.
      2. ELSE calculate $K^{\delta}_{\sigma p(k)}$. For all $\Gamma^{\delta}_{m}(gid(k))$ in $\Gamma^{\delta}(gid(k))$ do:
         1. IF $occ(\Gamma^{\delta}_{m}(gid(k))) \in (*,+)$, THEN
            Append $contentsAt(K^{\delta}_{\sigma p(k)}, \Gamma^{\delta}_{m}(gid(k)))$ beneath k.
         2. ELSE Append $first\_ex\_contentsAt(K^{\delta}_{\sigma p(k)}, \Gamma^{\delta}_{m}(gid(k)))$ beneath k.

EU_Folie18.PNG

Figure 18: Folie 18



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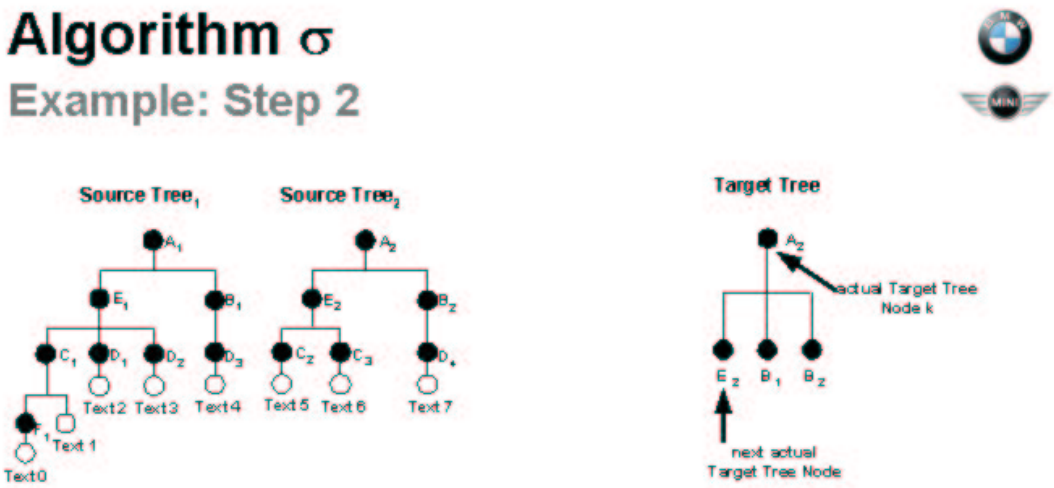

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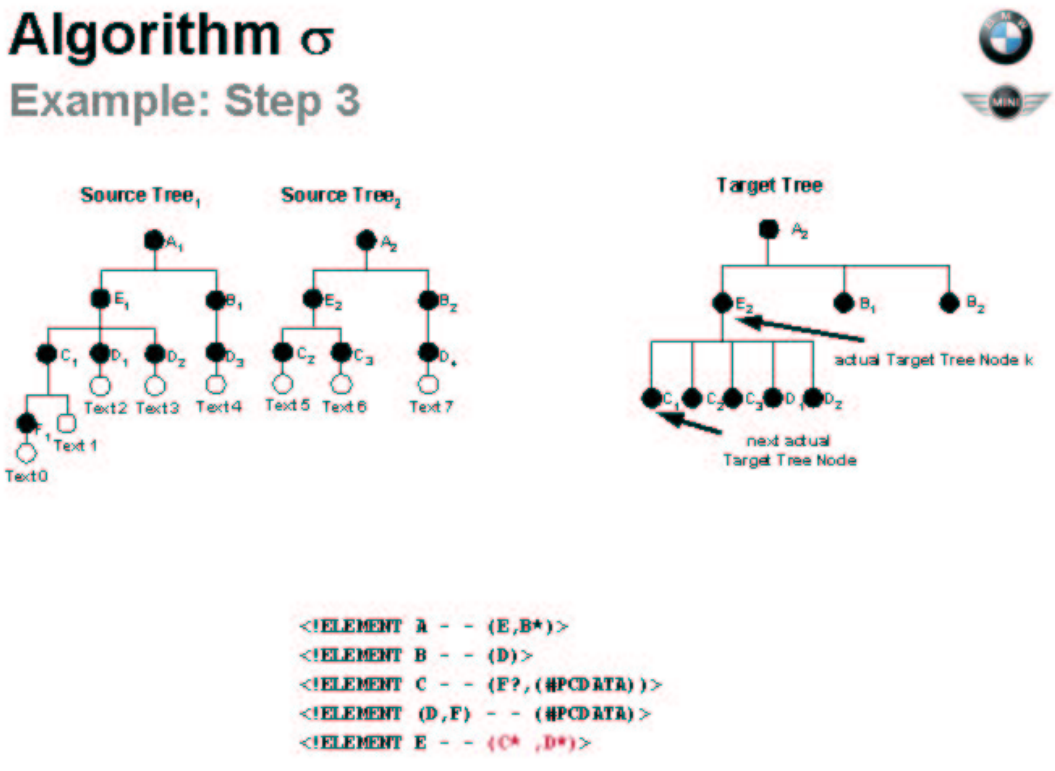

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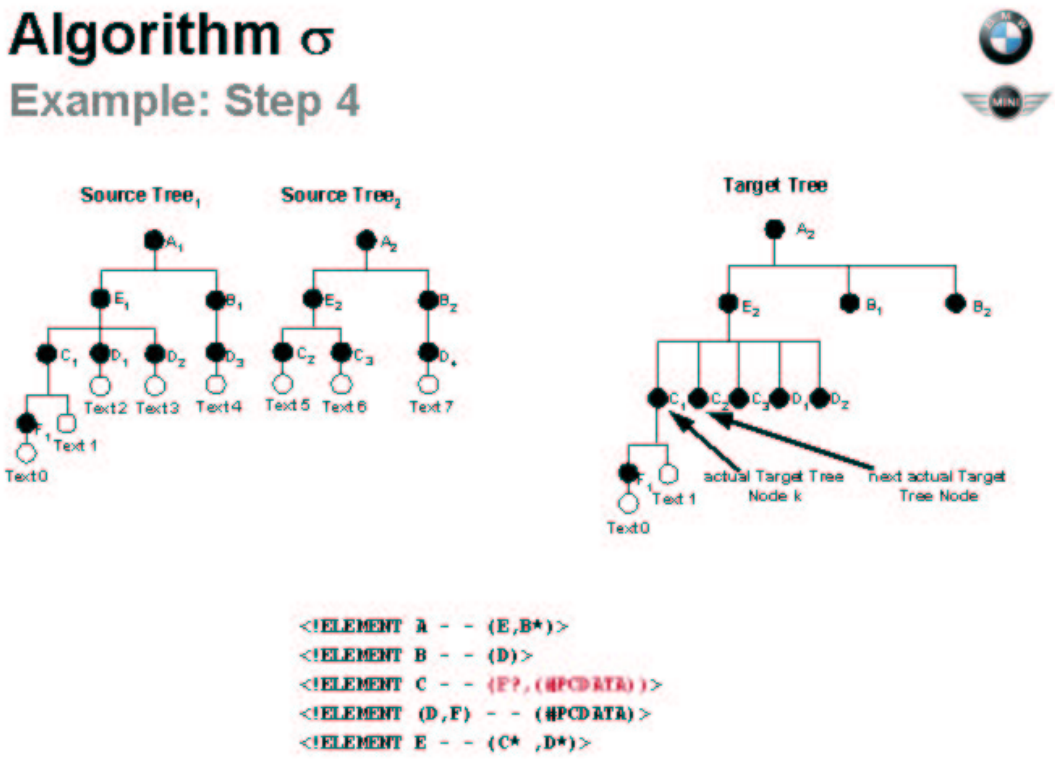

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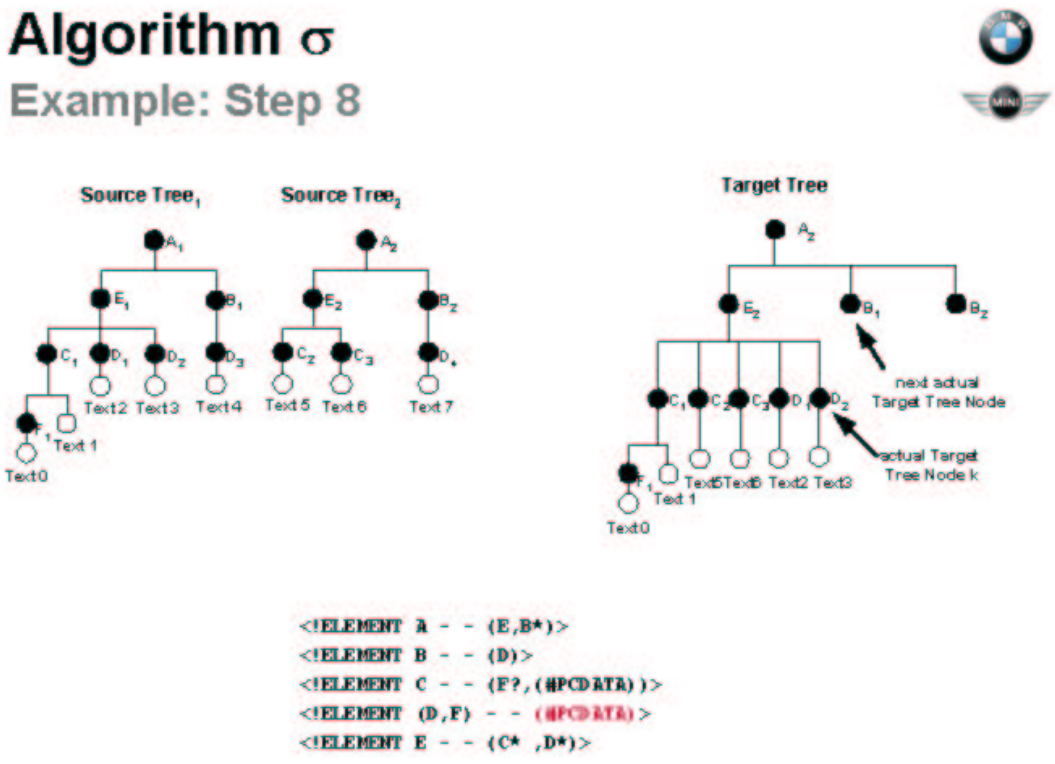

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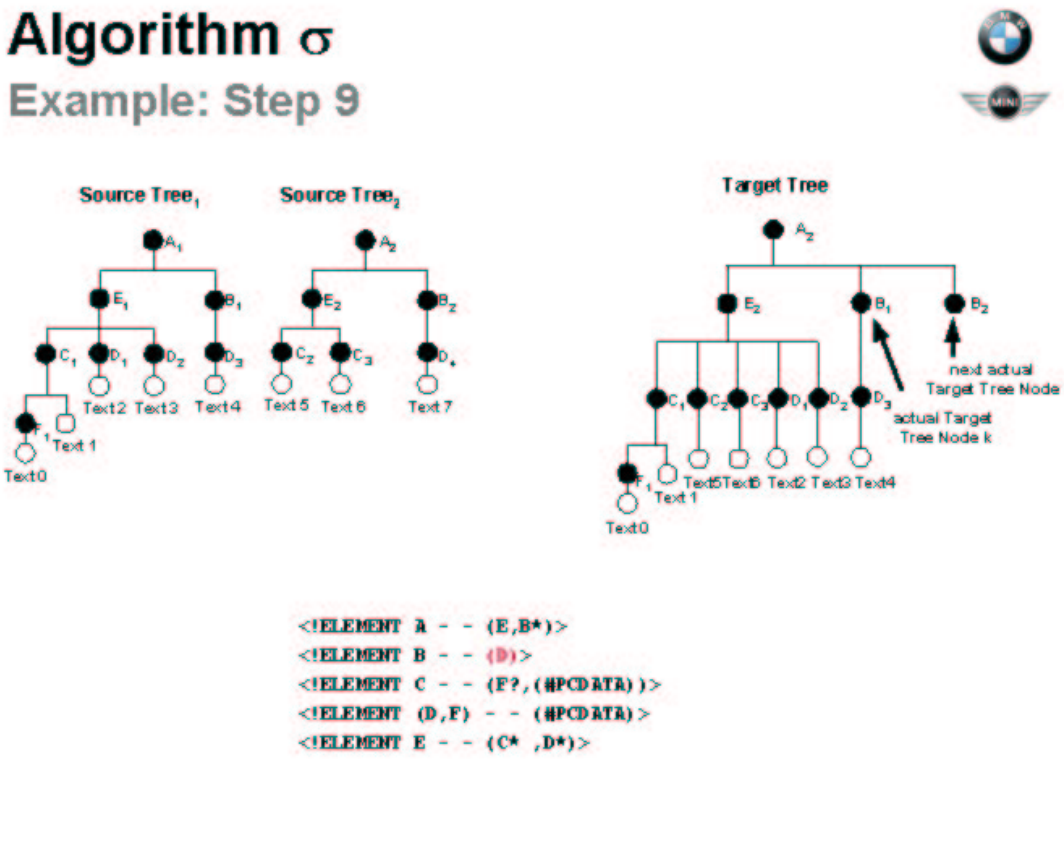

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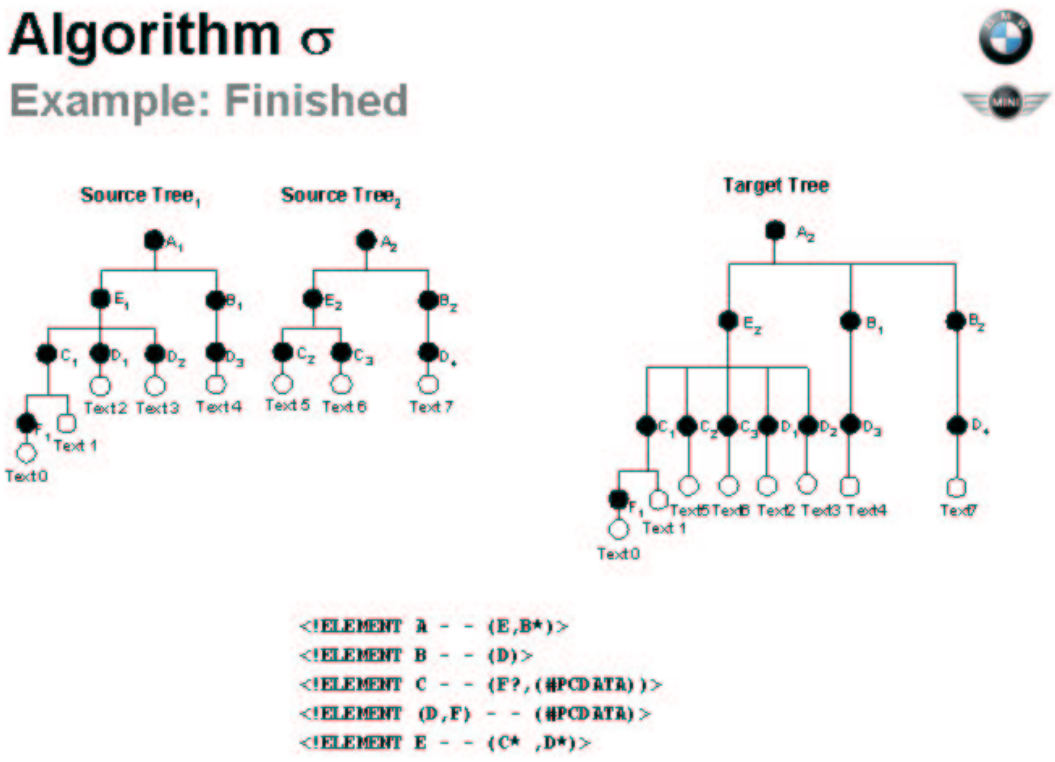

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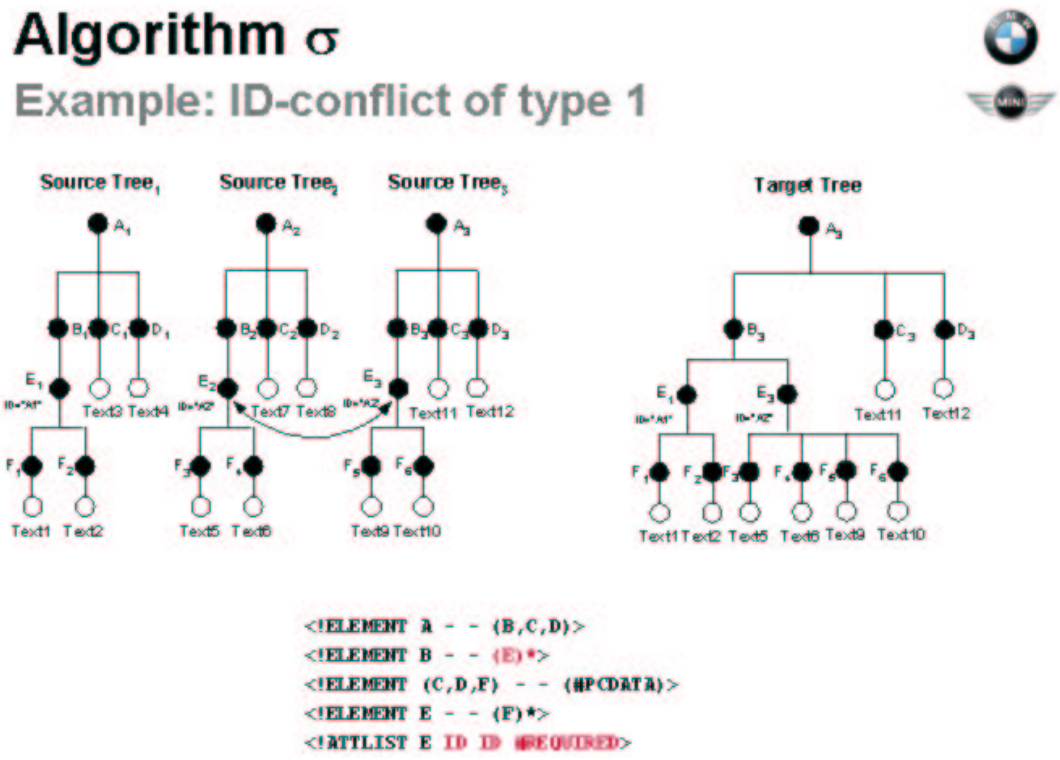

EU_Folie26.PNG

Figure 26: Folie 26

Algorithm σ

ID-conflict of type 2

```
<!ELEMENT A - - (Y?,B,Z?) >
<!ELEMENT B - - (C* ,D*) >
<!ELEMENT (C,D,E,F) - - (#PCDATA) >
<!ATTLIST C ID ID #REQUIRED >
<!ATTLIST D ID ID #REQUIRED >
<!ELEMENT Y - - (E)* >
<!ELEMENT Z - - (F) >
<!ATTLIST E  ID ID #REQUIRED >
<!ATTLIST F  ID ID #REQUIRED >
```

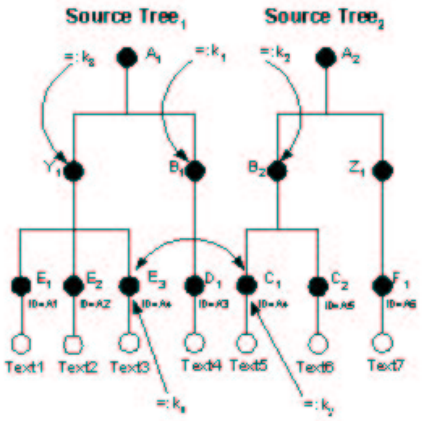

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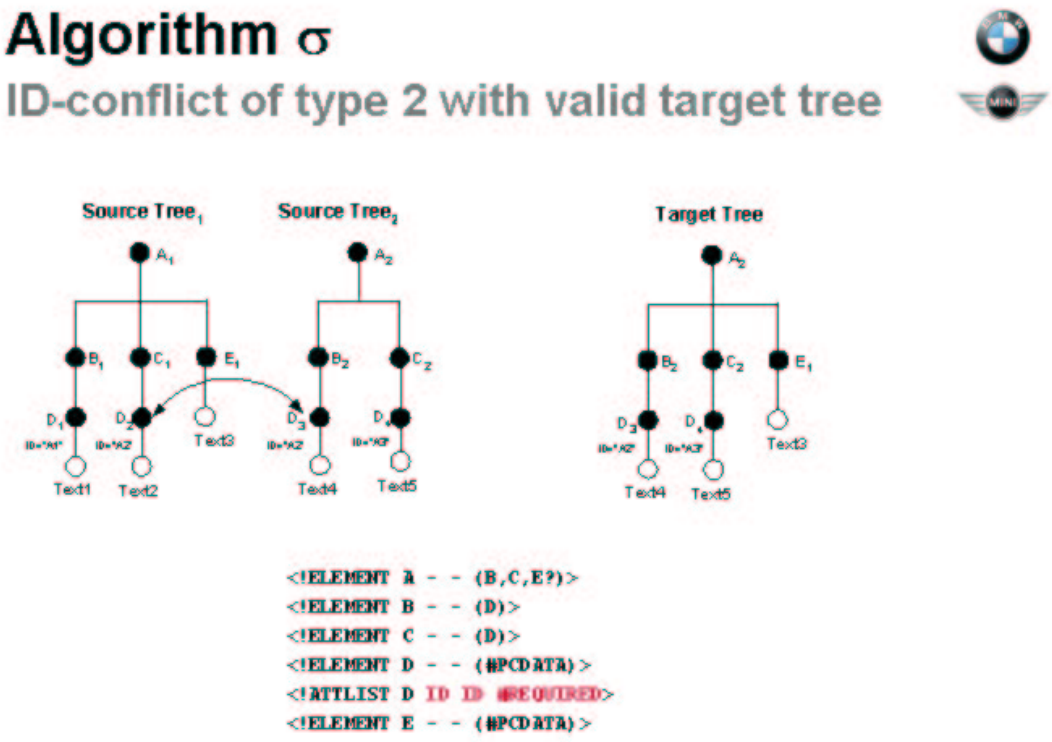
Figure 27: Folie 27



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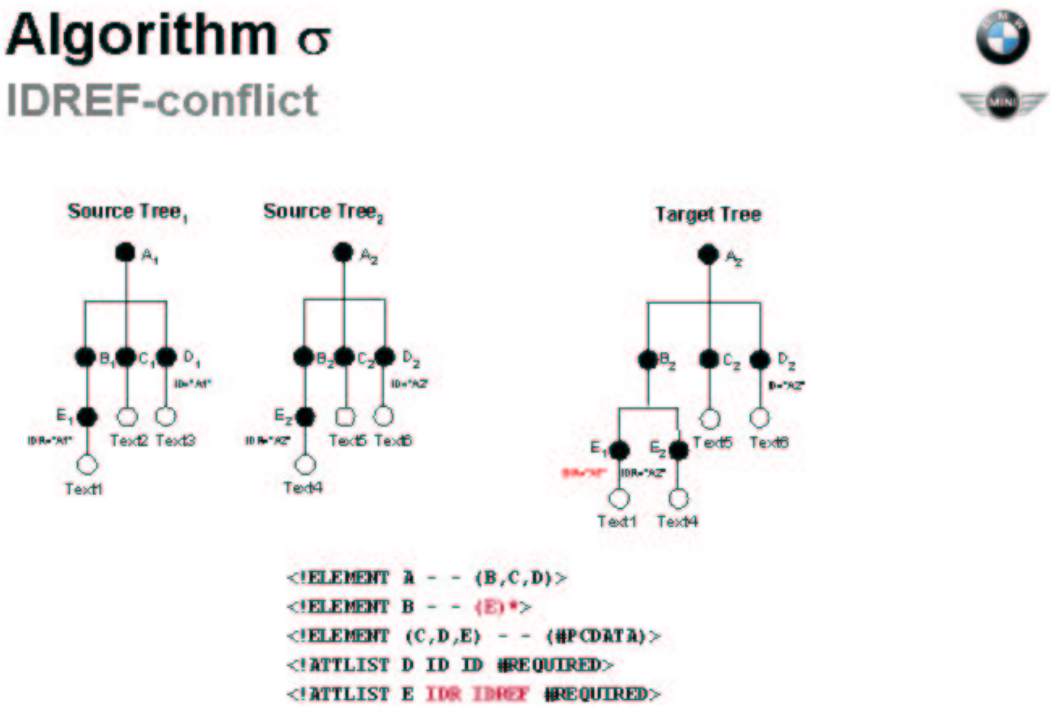

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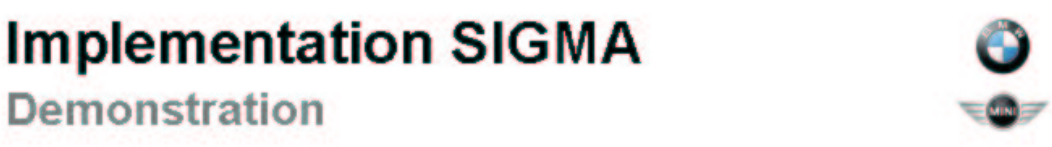
Figure 29: Folie 29



EU_Folie30.PNG

Figure 30: Folie 30

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EU_Folie31.PNG

Figure 31: Folie 31

Documentadministration

Versions Overview

Document Part	Date	Editor			
		Company	Version	State	Remarks
From page 4	1 RD 2002-11-03 Changes 1	Gerald Manger, BMW Group MEDOC			

Configuration Parameters

Company (—company)
MEDOC

Language (—lang)
English

Treatment of content for Xrefs (—xrefcontent)
Xref classes are shown

Specifying 'See' for XRefs
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Treatment of filenames in graphics (—figname)
Filenames for graphics are shown

Treatment of width and height attributes of graphics (—figdimension)
Width and height of graphics is not considered

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Logo Graphic (—head-logo)
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Local administrative data is output

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MetaMorphosis-Version
3.2

Form Version
2.0 (MetaPage)

Date
21/05/2002 11:10:12