TOPIC-BASED SGML?

REALLY?

BALISAGE 2021

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Last year, I got myself a new client...

"Go-to guy for everything markup"

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XSLT, FO, XML standards

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XSLT, FO, XML standards

DITA

"Go-to guy for everything markup"

XSLT, FO, XML standards

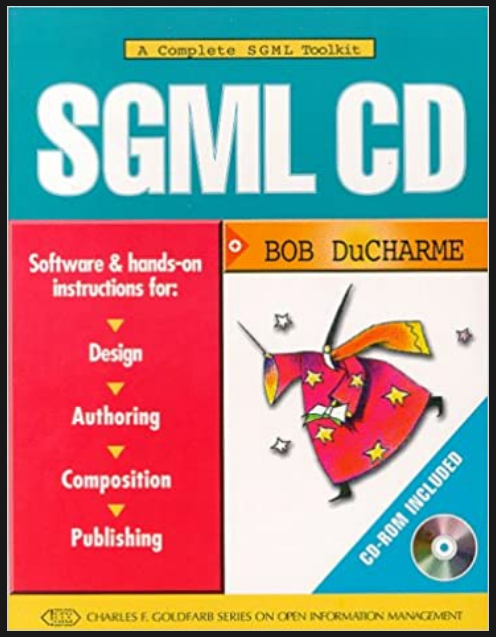
DITA

S1000D

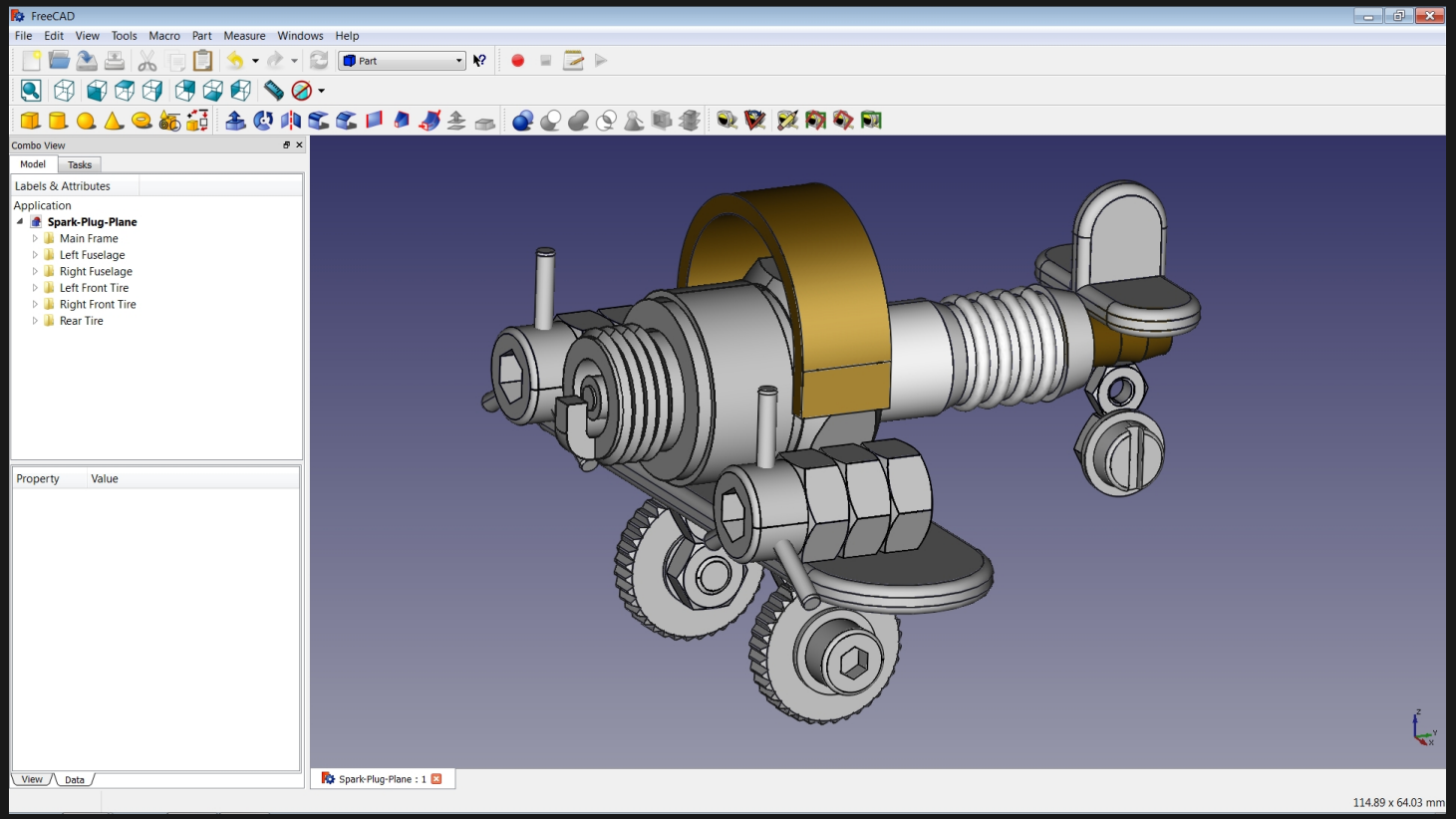
ATA (iSpec 100, 2200)

Chap.	Subject	Chap.	Subject
00	Air Vehicle General	51	Standard Practices – Structures
04	Airworthiness Limitations	52	Doors
05	Time Limits/Maintenance Checks	53	Fuselage
06	Dimensions and Areas	54	Nacelles and Pylons
07	Lifting, Shoring, Recovering and Transporting	55	Stabilizers
08	Levelling and Weighing	56	Windows and Canopies
09	Handling and Taxiing	57	Wings
10	Parking and Mooring	60	Standard Practices – Propeller or Rotor
11	Placards and Markings	61	Propellers and Propulsors
12	Servicing	62	Main Rotors
14	Air Vehicle Loading and Offloading	63	Main Rotor Drives
15	Aircrew Information	64	Tail Rotor
16	Change of Role	65	Tail Rotor Drive
18	Vibration and Noise Analysis and Attenuation	66	Folding Blades and Pylon
20	Standard Practices – Airframe Systems	67	Rotors Flight Control
21	Environmental Control	70	Standard Practices – Engine
22	Auto Flight	71	Power Plant
23	Communications	72	Engine

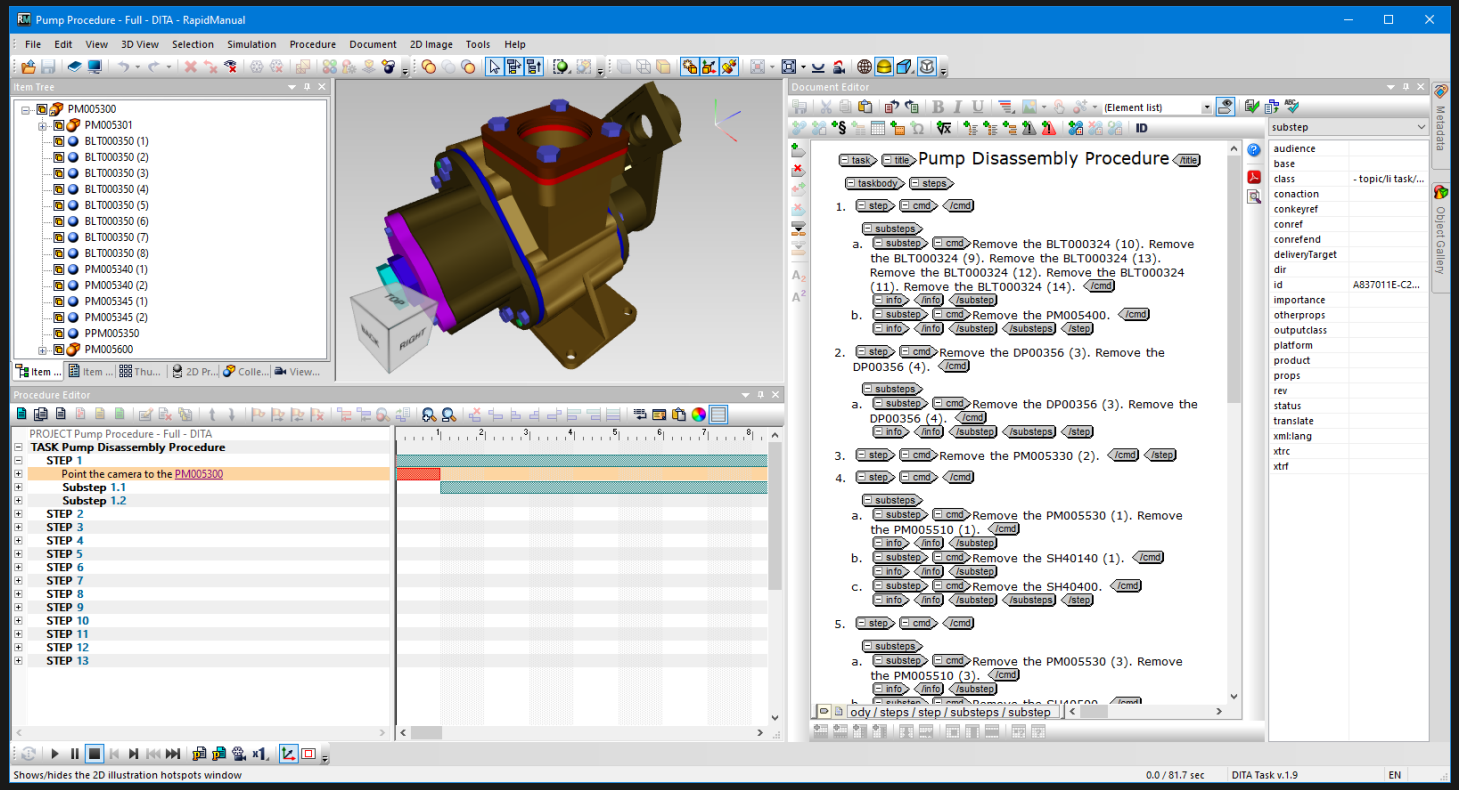
SGML?


A Complete SGML Toolkit
SGML CD
BOB DuCHARME
Software & hands-on instructions for:
Design
Authoring
Composition
Publishing
CD-ROM INCLUDED
CHARLES F. GOLDFARB SERIES ON OPEN INFORMATION MANAGEMENT

SLM and engineering data



Marry CAD with topics



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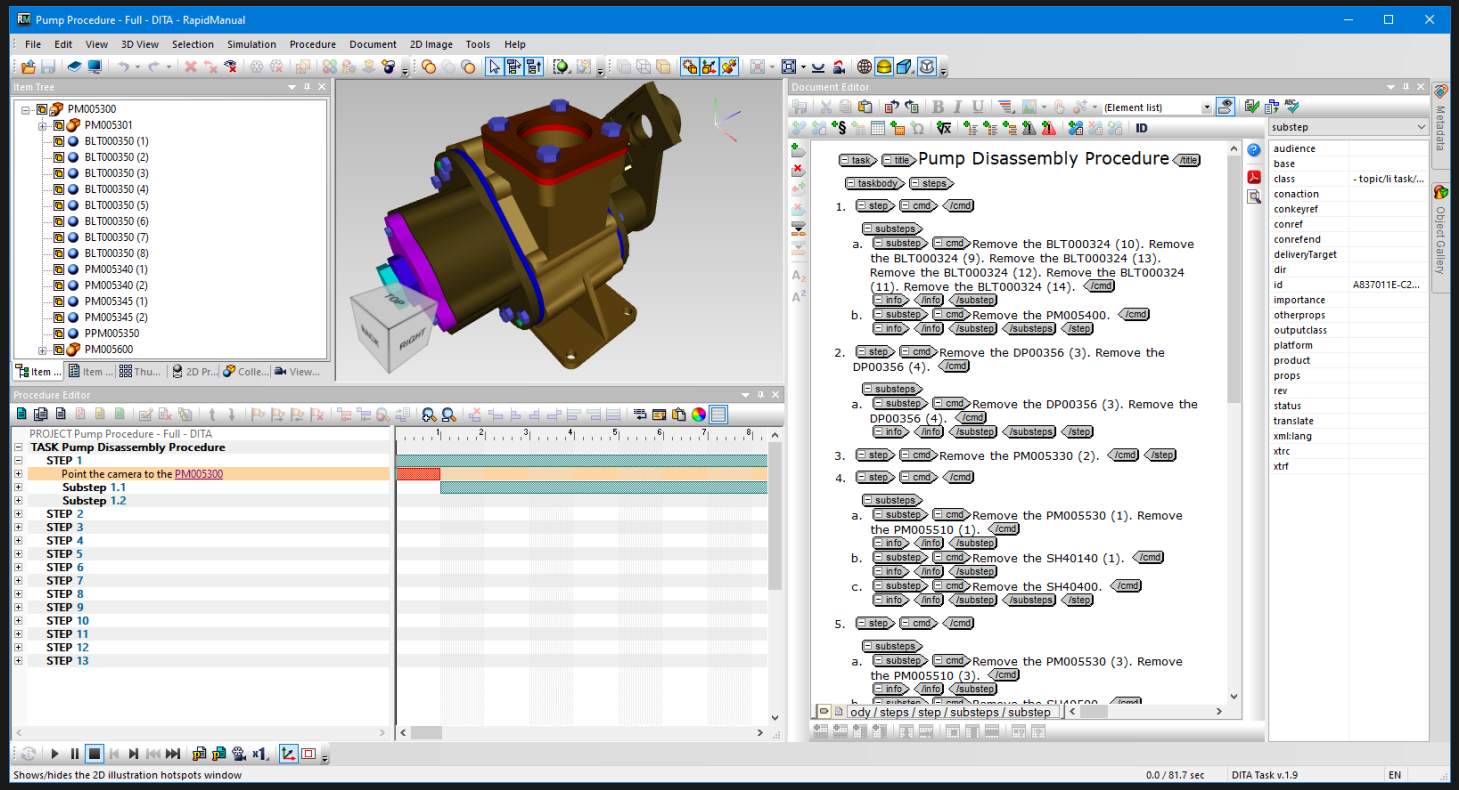
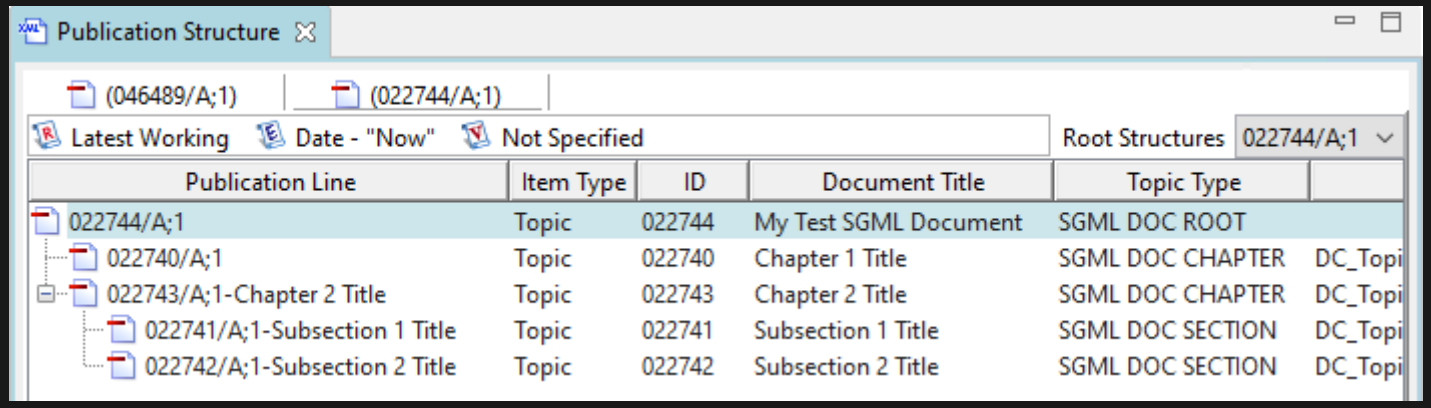
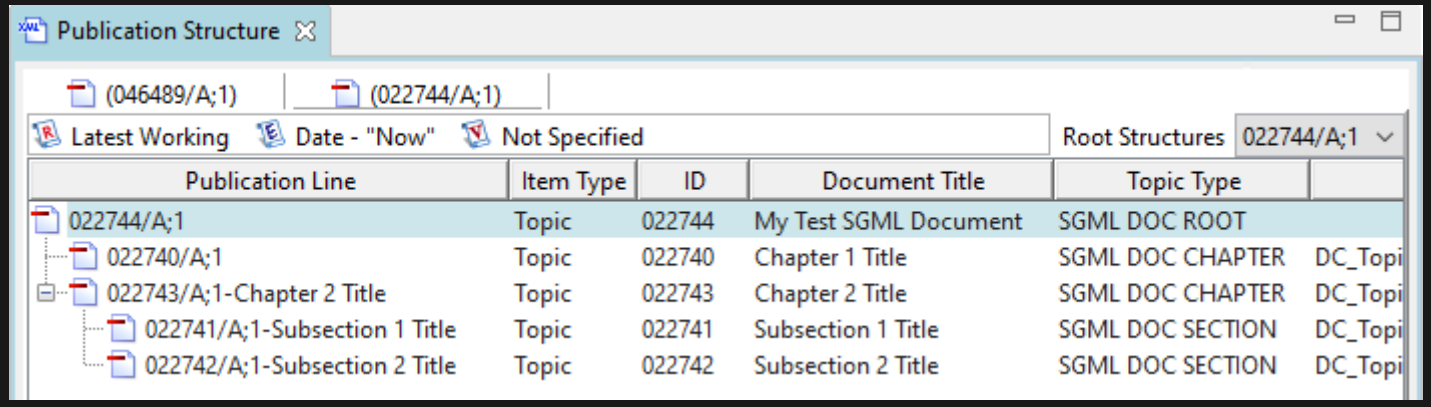


Enter Siemens Teamcenter

Teamcenter CMS module

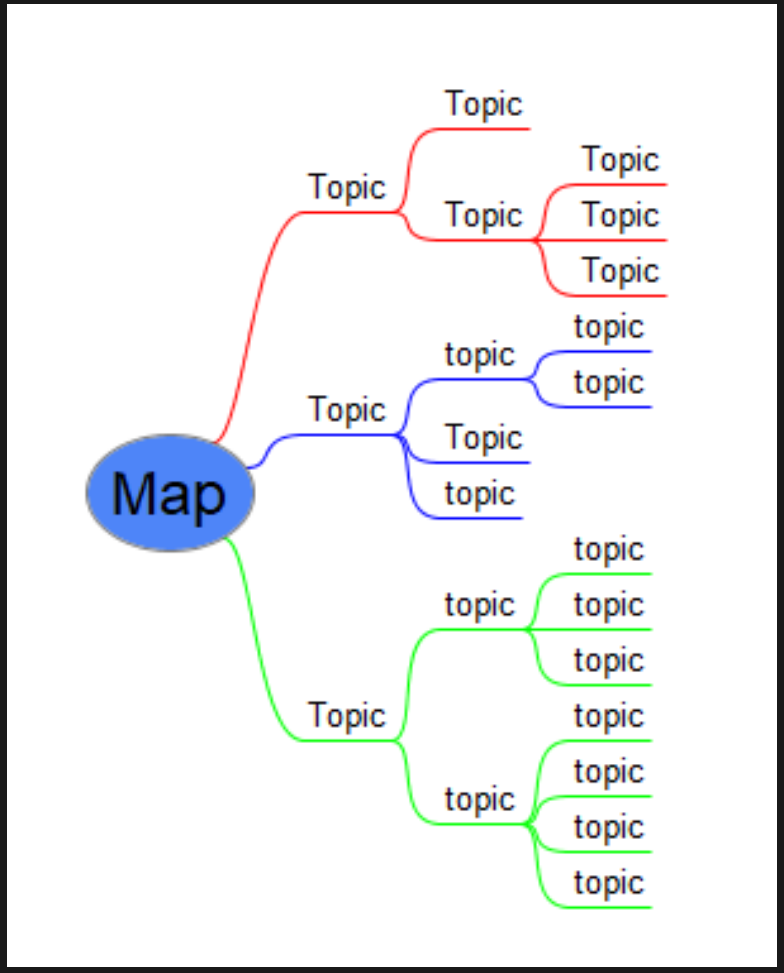


Teamcenter CMS module

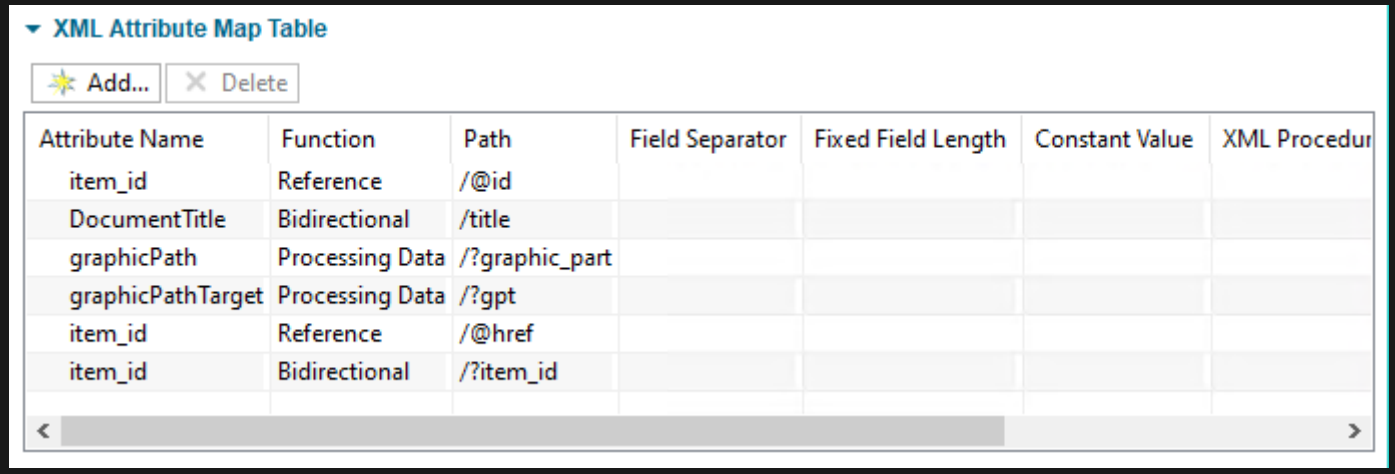


It's all about *"topics"*

Decomposing documents into topics



"XML Attribute Mapping"



- DITA, S1000D...
- *"Any XML DTD..."*

...and SGML

THE POWER OF A GOOD SALES TEAM

The client:

- Aerospace manufacturer

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- Already uses Teamcenter

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- Aerospace manufacturer
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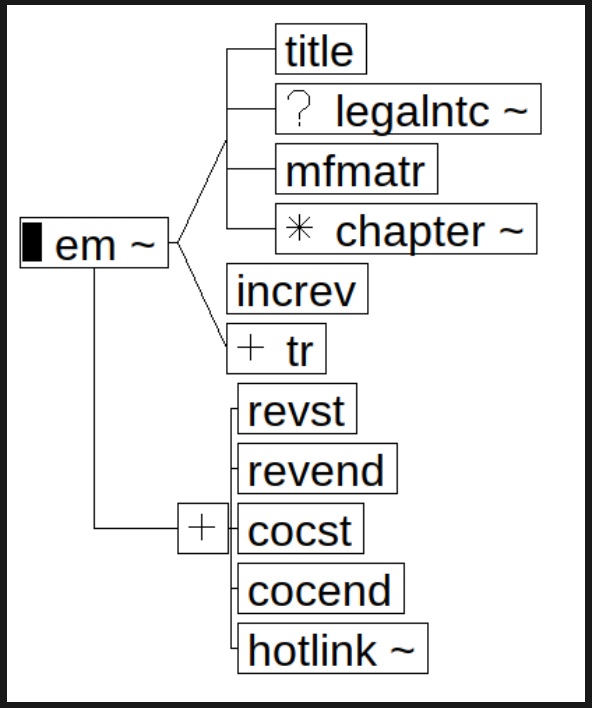
- S1000D
- ATA iSpec 2200 SGML

"Yes, Teamcenter supports SGML"



BUT DOES IT REALLY?

No

WHY NOT?

Graphic entities

<!ENTITY g5027619-00.cgm SYSTEM "g5027619-00.cgm" NDATA cgm>

<!ENTITY name SYSTEM "name.suffix" NDATA cgm>

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Preprocessing to rename files - didn't want to edit the SGML itself, just the entity declarations and filenames

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<!ENTITY name.suffix SYSTEM "name.suffix.suffix" NDATA cgm

DOCTYPE

```
6157   <!ENTITY g5035251-00.cgm SYSTEM "g5035251-00.cgm" NDATA cgm>
6158   <!ENTITY g5027619-00.cgm SYSTEM "g5027619-00.cgm" NDATA cgm>
6159   ]>
```

EMPTY elements

```
<PARA>S/B<SBNBR>73-0177</SBNBR>,
<REVST>Revision 1<REVEND></PARA>
```

EMPTY elements

```
<PARA>S/B<SBNBR>73-0177</SBNBR>,
<REVST>Revision 1<REVEND></PARA>
```

```
<PARA>S/B<SBNBR>73-0177</SBNBR>,
<REVST>Revision 1</REVST></REVEND></PARA>
```

```
</SUBTASK></TASKPROC>
</REVEND>
</TASK></PGBLK></SUBJECT></SECTION></CHAPTER></EM>
```

Dropping content

```
<SBEFF EFFTEXT="Bolthead at Bolthole No. 15 Facing
the 12:00 O'clock Position" SBNBR="72-0078" SBCOND="PRE SB">
```

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```

```
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```

Publishing

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"DSSSL, anyone?"

No DSSSL, (mostly) XML technologies:

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(we already had DITA to HTML stylesheets, so...)

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1. SP for SGML to XML syntax - *"ATA-like XML"*
2. XProc pipeline to convert to *"monolithic DITA"*
3. XSLT to break apart to DITA topics
4. DITA stylesheets

The XML bits were uncomplicated

```
0-em-basic-structure.xml
1-ATA2DITA_main-structure.xsl.xml
2-ATA2DITA_tasks.xsl.xml
3-ATA2DITA_front-matter.xsl.xml
4-ATA2DITA_tfmatr.xsl.xml
5-ATA2DITA_prclists.xsl.xml
6-ATA2DITA_figtopic.xsl.xml
7-ATA2DITA_effectivity.xsl.xml
8-ATA2DITA_chgdesc.xsl.xml
9-ATA2DITA_dates.xsl.xml
10-ATA2DITA_lxlists.xsl.xml
11-ATA2DITA_table.xsl.xml
12-ATA2DITA_lists.xsl.xml
13-ATA2DITA_block-level.xsl.xml
14-ATA2DITA_graphics.xsl.xml
```

Other issues

- Decompose/compose performance
- Editor integration
- (etc)

But far worse still...

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Few of the people involved know SGML

IS SGML (STILL) WORKABLE?

Well, I don't really think so...

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- Few tools support SGML

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- Three (3) production-quality editors still around

Well, I don't really think so...

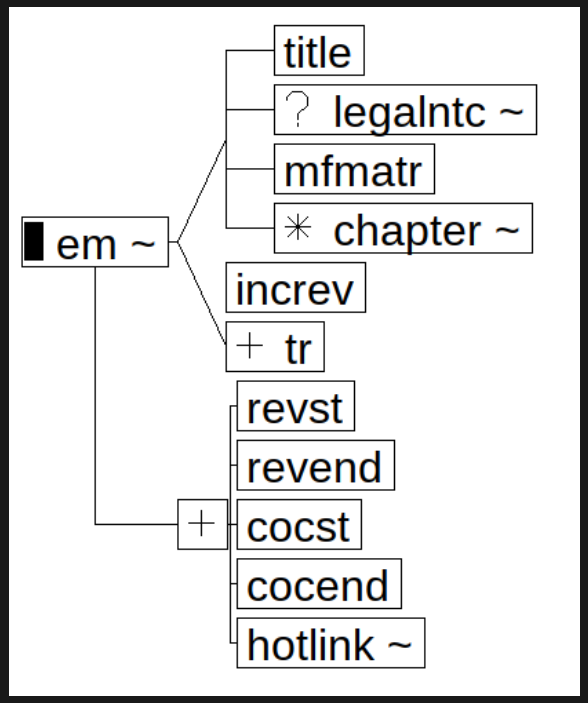
- Few tools support SGML
- Three (3) production-quality editors still around
- Few people know SGML

XML really is

"SGML, the good parts"

SO, WHAT ABOUT XML?

"ATA-like XML" DTDs



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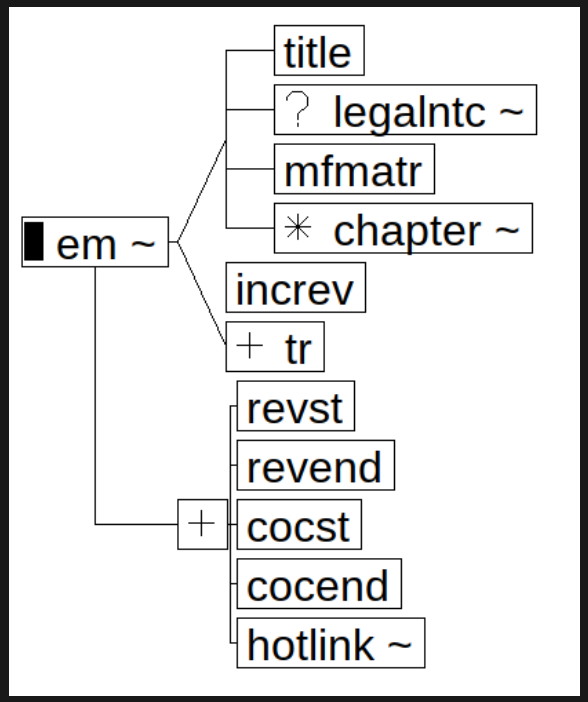

- SGML inclusions => PIs

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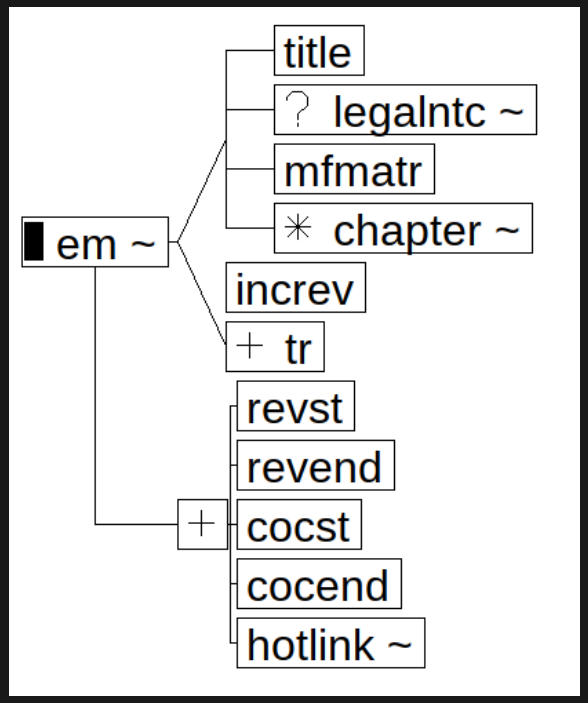
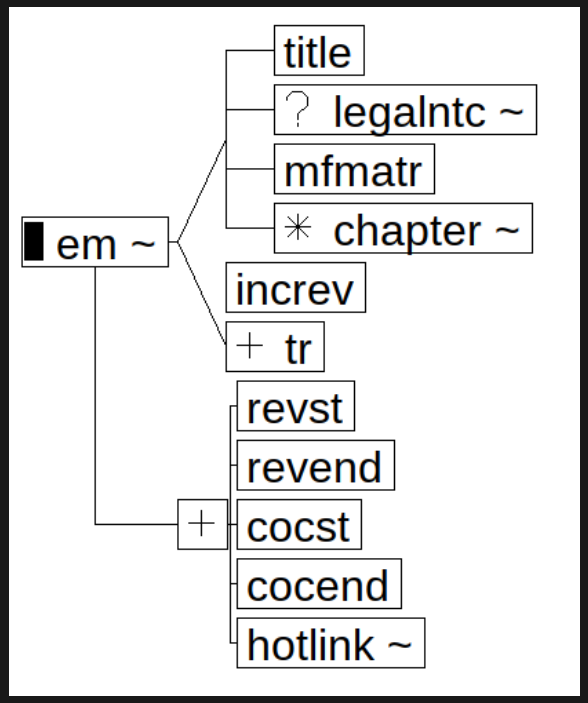


- SGML inclusions => PIs
- SGML exclusions => Schematron rules

"ATA-like XML" DTDs



- SGML inclusions => PIs
- SGML exclusions => Schematron rules
- Graphic entities => href links

Publishing and legacy SGML conversion

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We already have both

XML to SGML

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1. Tweak models in XML

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2. Generate SGML DOCTYPE (and entities) in XML

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Bonus feature:
Easily tweak the SGML output to fit different partners, customers

NOW

NOW

They're testing the ATA XML approach as I speak

So, again, SGML? Topic-based SGML?

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Please don't.

THANK YOU!