

# Xtrace Toolkit

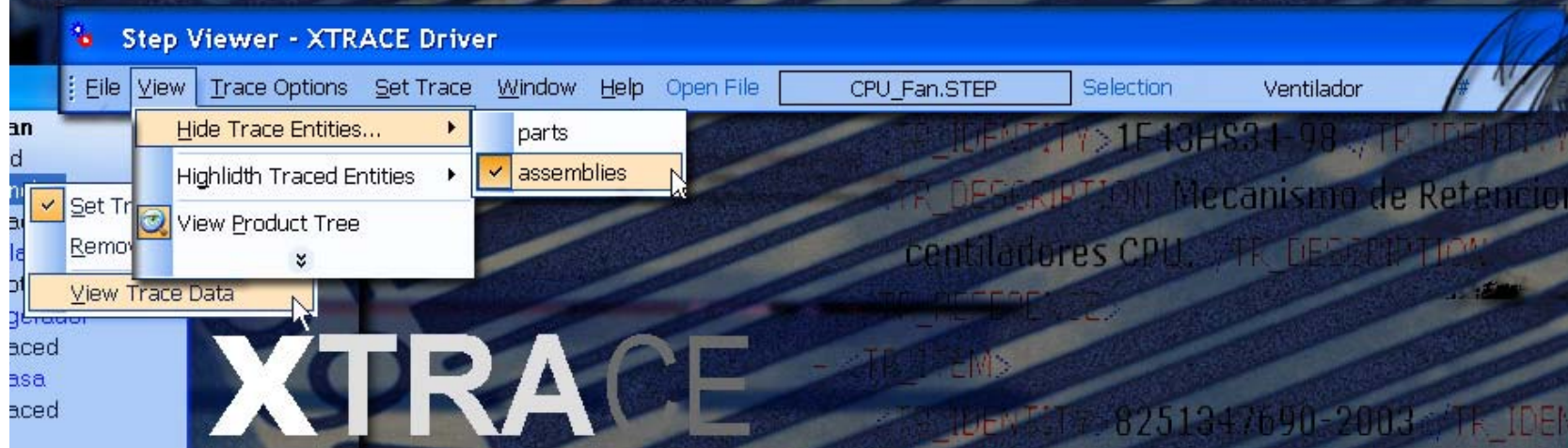
demo tour

beta 1.0

Current version: 1.0

```
<PART_IDENTITY="ID4163" trace="true"
```

```
<NAME_IDENTIFIER>Retencion </NAME_IDENTIFIER>
```



# XTRACE

Ole automation driver for **ST Viewer™** & **SolidWorks™** dll Plugin.

xml data model

- **Presentation Context.**

1. Trazability:

Trazability along the whole Product Life Cycle.

2. “Trazability & e-Manufacturing” Project.

Overview & Tools.

Tools: Main Features.

1. CAD Entities Trace Configuration.

2. Traced Data Display.

3. Future development.

4. Download samples.



# Trazability Today

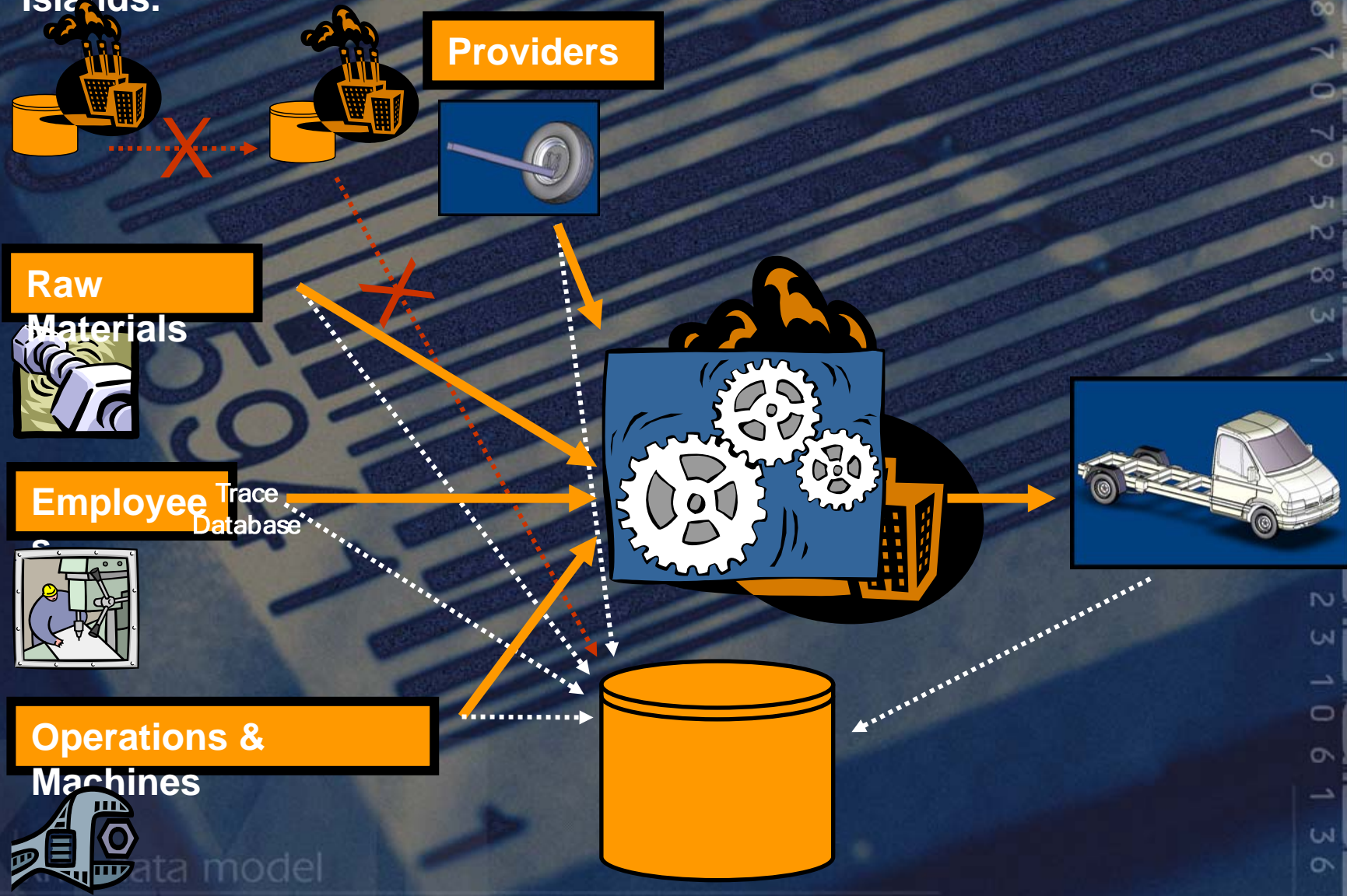
Trace Database are unconnected Data Islands.

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8 7 0 7 9 5 2 8 3 1

2 3 1 0 6 1 3 6 0



# Trazability Tendencies

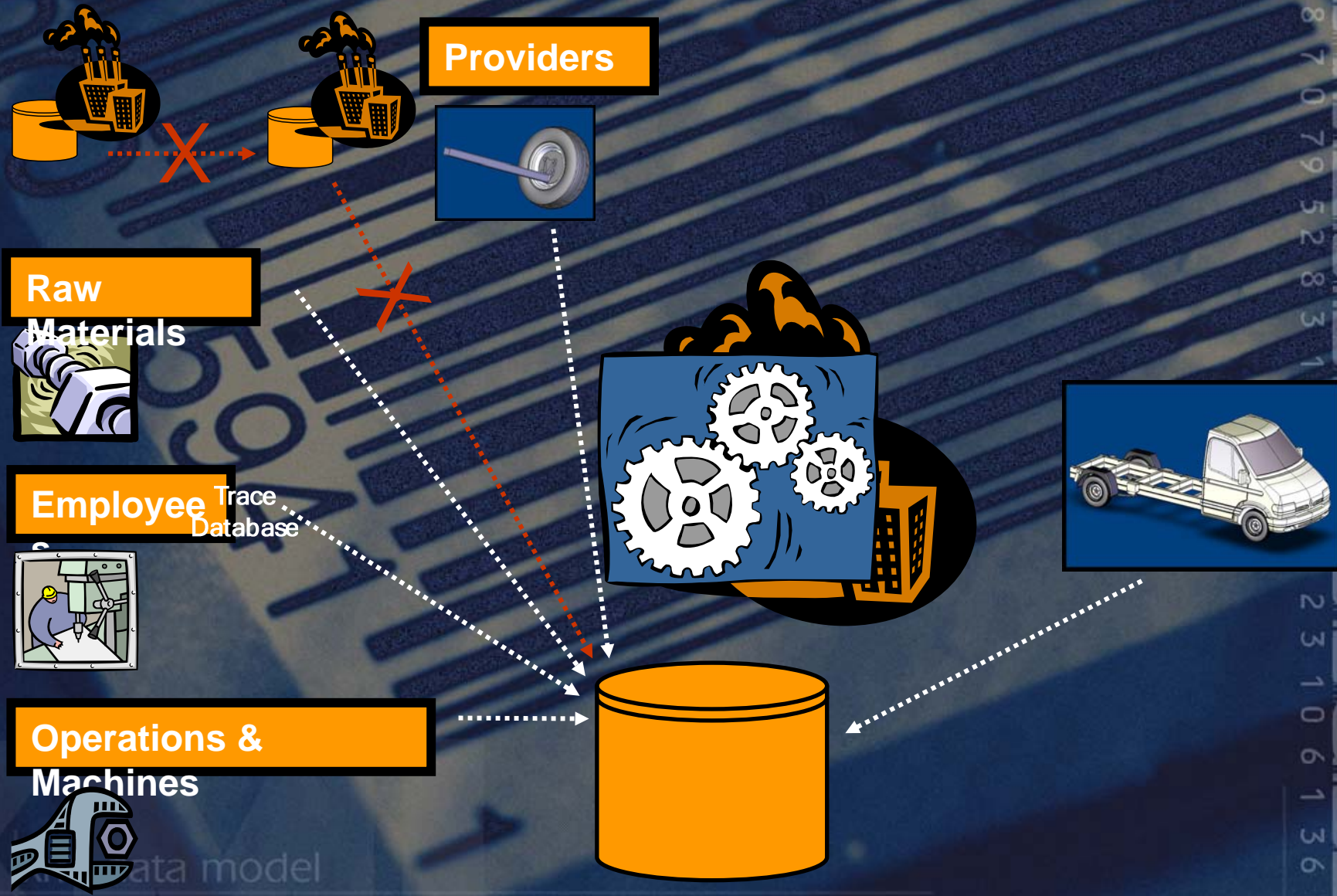
Trace Data Along Whole Product Life Cycle

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8 7 0 7 9 5 2 8 3 1

2 3 1 0 6 1 3 6 0



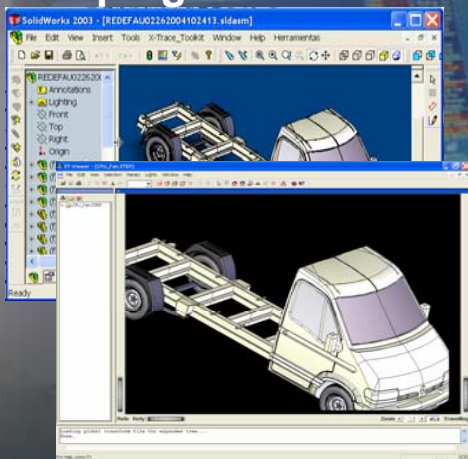
## Trazability Along Whole Product Cycle Life



1. Making the trazability configuration (what to trace), while making CAD designs.
2. Transfer the trazability configuration (along with CAD models) to manufacturers.
3. TRACE. generate trace data (while manufacturing)
4. Transfer new trace data back to designers.
5. Handling incoming trace data: store, view, audit...

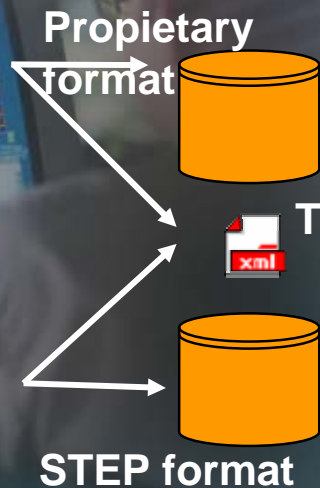
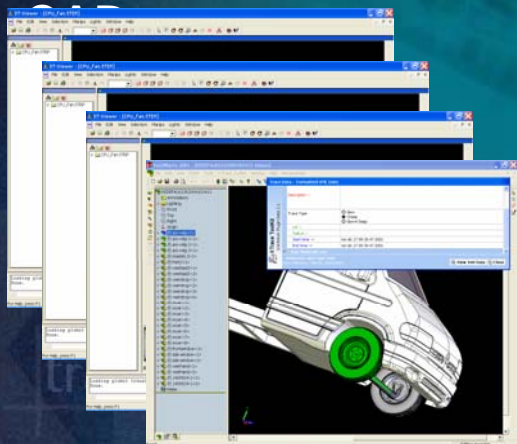
# 1. Configuration While Design

SW plugin



ST Viewer  
Driver

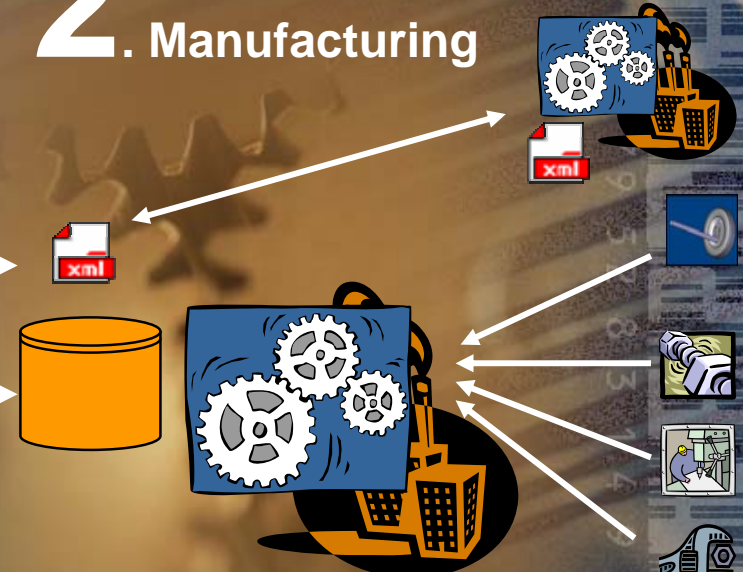
# 3. Trace Data Visualization on



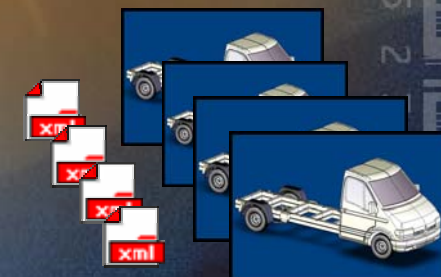
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# 2. Manufacturing



Trace  
Database



Trace  
Database

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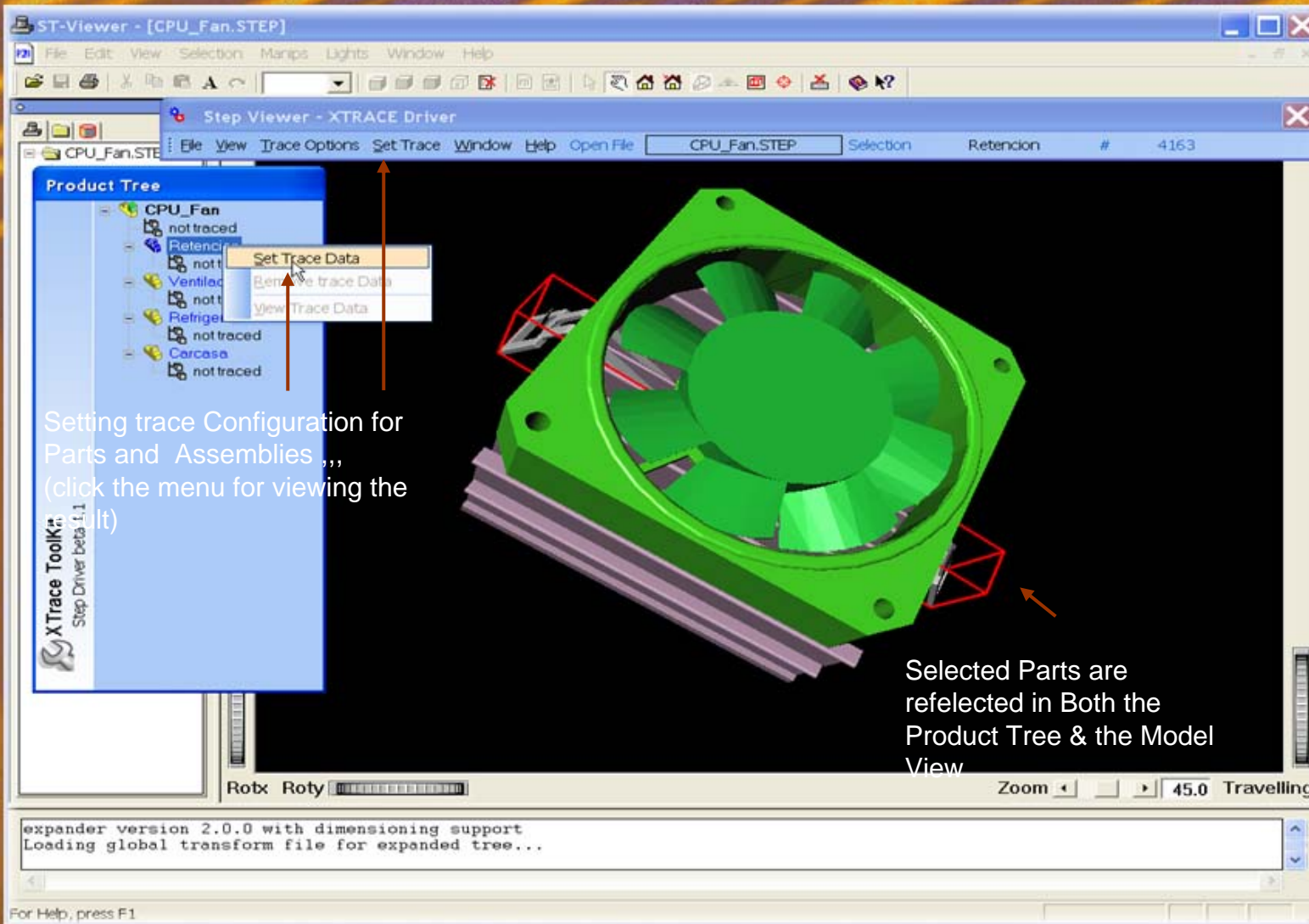
- **Tools: Main Features**

1. Trace Configuration for CAD entities.

xml data model

# Xtrace Toolkit

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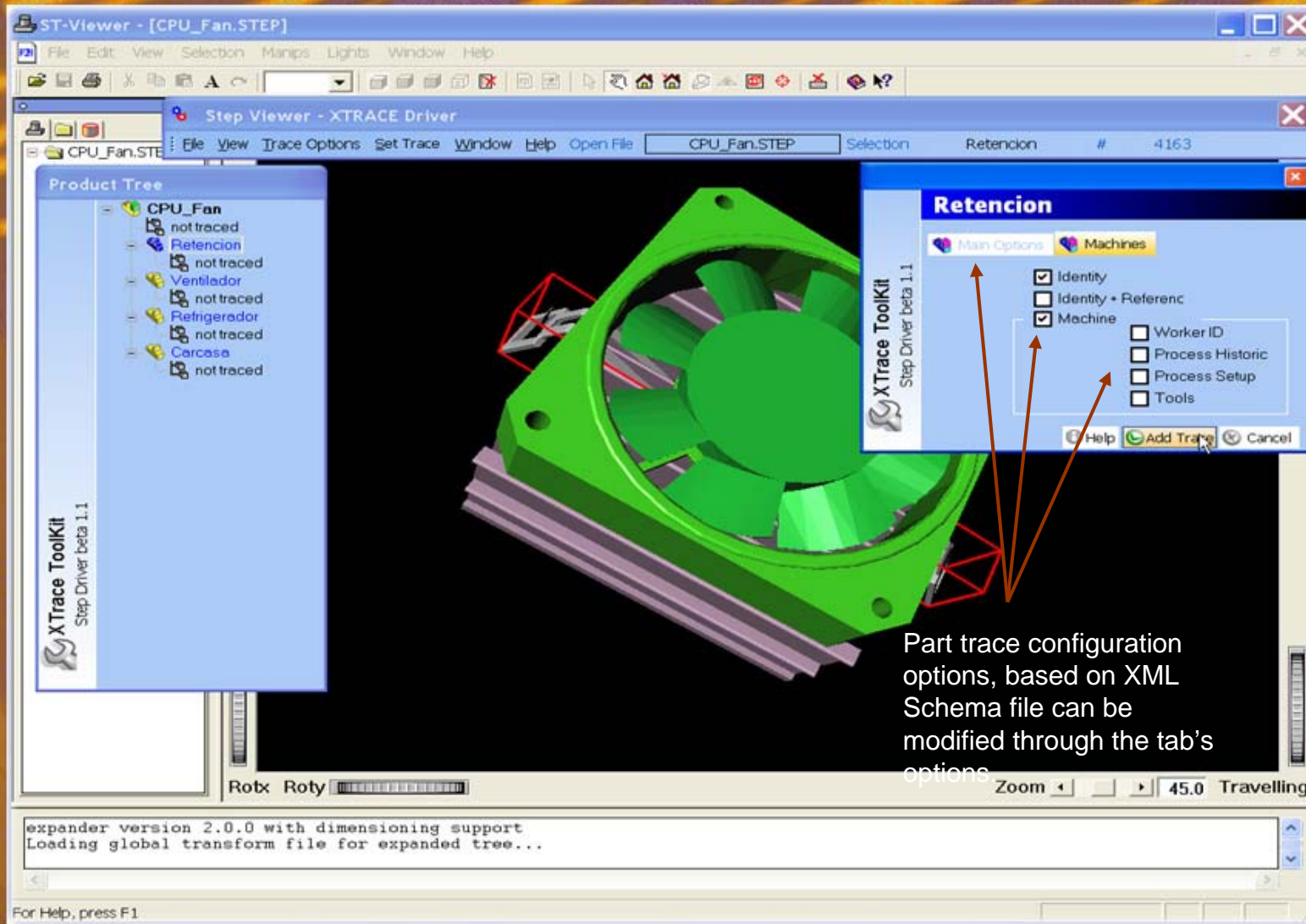
Setting trace Configuration for Parts and Assemblies (click the menu for viewing the alt)

Selected Parts are reflected in Both the Product Tree & the Model View



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Part trace configuration options, based on XML Schema file can be modified through the tab's options

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PRODUCT LABEL - Located on product



SERIAL # 762  
37 Sh...  
Wood Grain  
Aquarium  
UPC

The Manufacturer must return specific Item or Cheep Trace Data Info, requiring different barcode formats.

MANUFACTURING LABEL - Located inside your new tank, under the upper trim

SERIAL #708362  
Date of  
Tank

Specific Machine Information must be included by the manufacturer, - tools, process historic, process setup .. – integrating this Information into barcode fields.

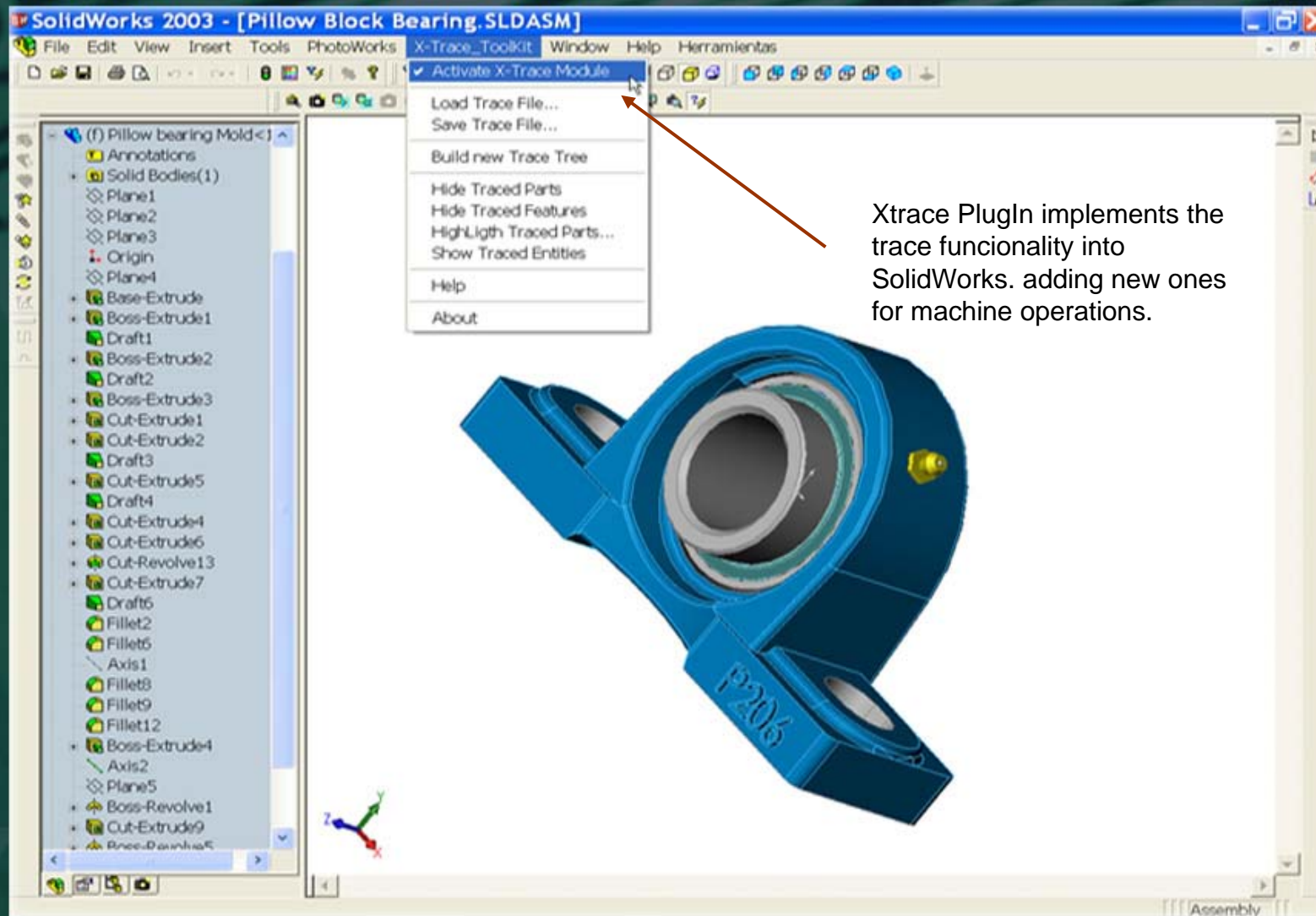
3 4040996 101360009 9	Menge (Stk)
040996 44444 7	60
05.2008	Chargennummer
40 40996 00999 9	Beutogewicht
	525 kg

Raw Material Data Information must be included by the manufacturer, again this information is reflected on barcode - references, caducity dates, conditions of use -

The image displays three screenshots of the XTrace Toolkit software interface, specifically the 'Retencion' (Retention) settings window. The window title is 'XTrace Toolkit Step Driver beta 1.1'. The first screenshot shows the 'Main Options' tab with a 'Select Trace Type' dropdown menu set to 'Item'. The second screenshot shows the 'Resources' tab with checkboxes for 'Identity', 'Identity + Referenc', and 'Machine'. The third screenshot shows the 'Resources' tab with a 'Materials Extra Options' section containing checkboxes for 'Identity', 'Identity + Descr.', 'Caducity Date', and 'Conditions of Use'. Arrows from the text blocks point to these specific settings.

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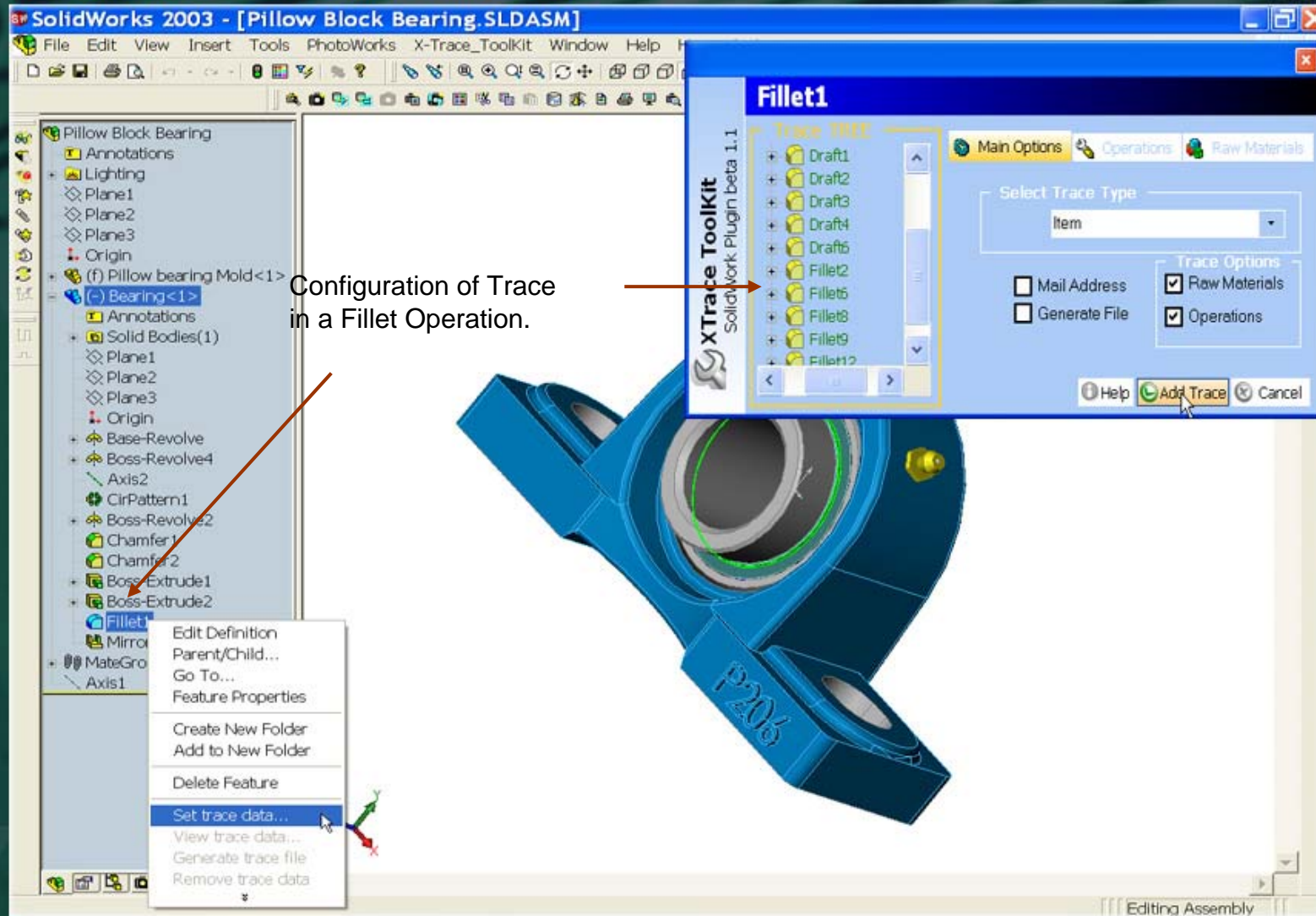


Xtrace PlugIn implements the trace functionality into SolidWorks. adding new ones for machine operations.

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6  
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# Xtrace Toolkit

beta 1.0



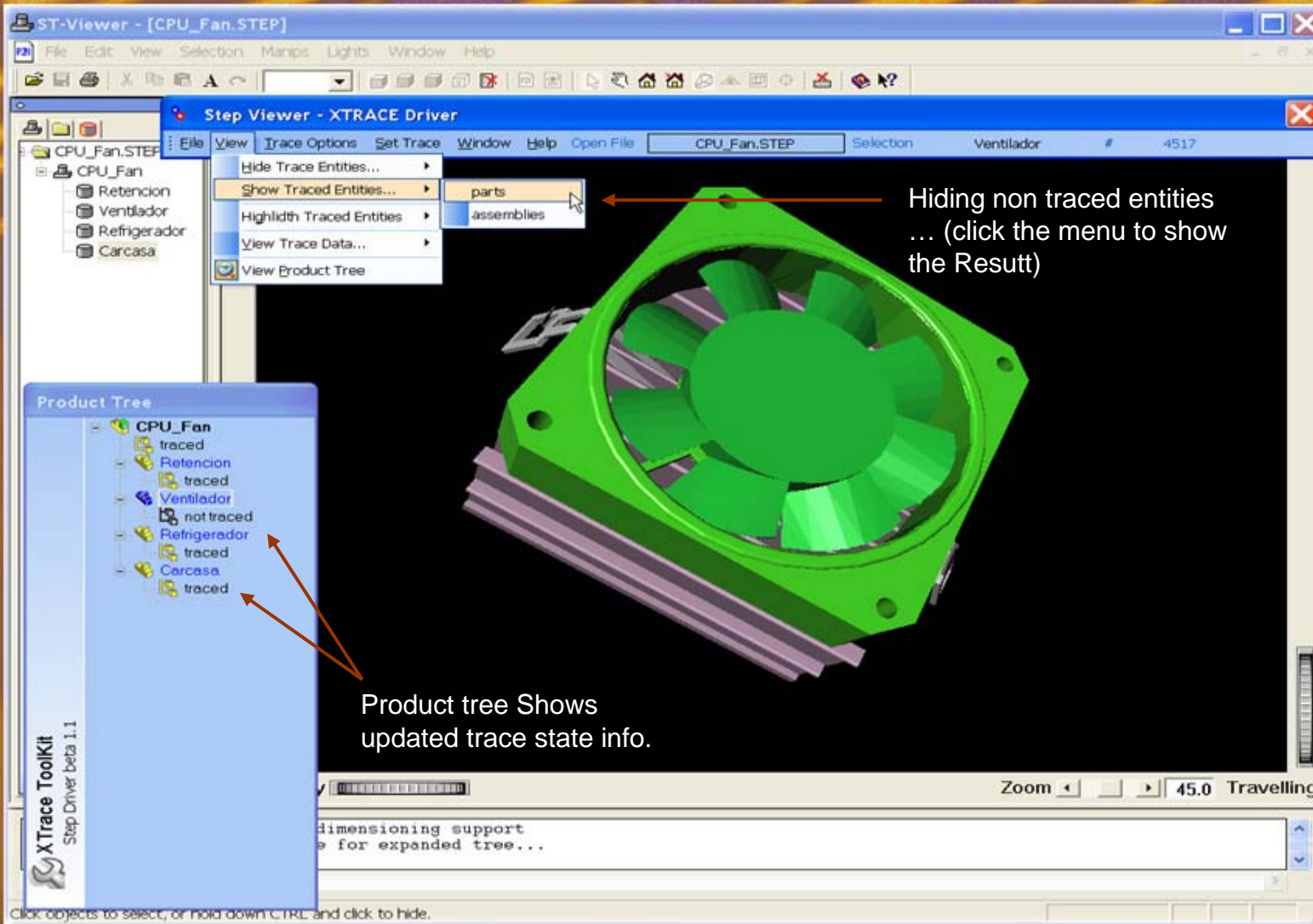
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- **Tools: Main Features**

1. Trace Configuration for CAD entities.
2. Hide/Show CAD Entities depending on trace configuration state.

# Xtrace Toolkit

beta 1.0

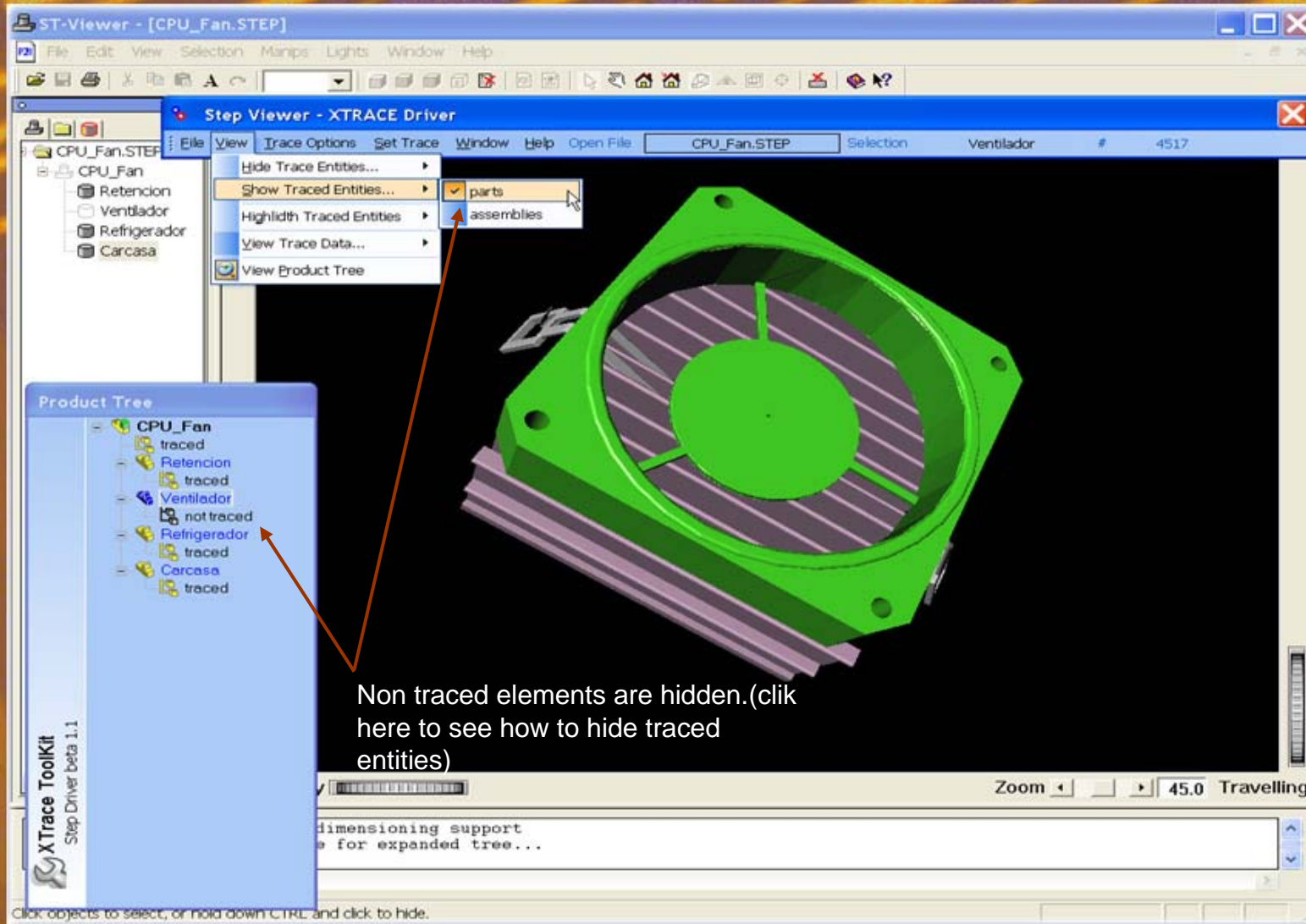


Hiding non traced entities ... (click the menu to show the Result)

Product tree Shows updated trace state info.

# Xtrace Toolkit

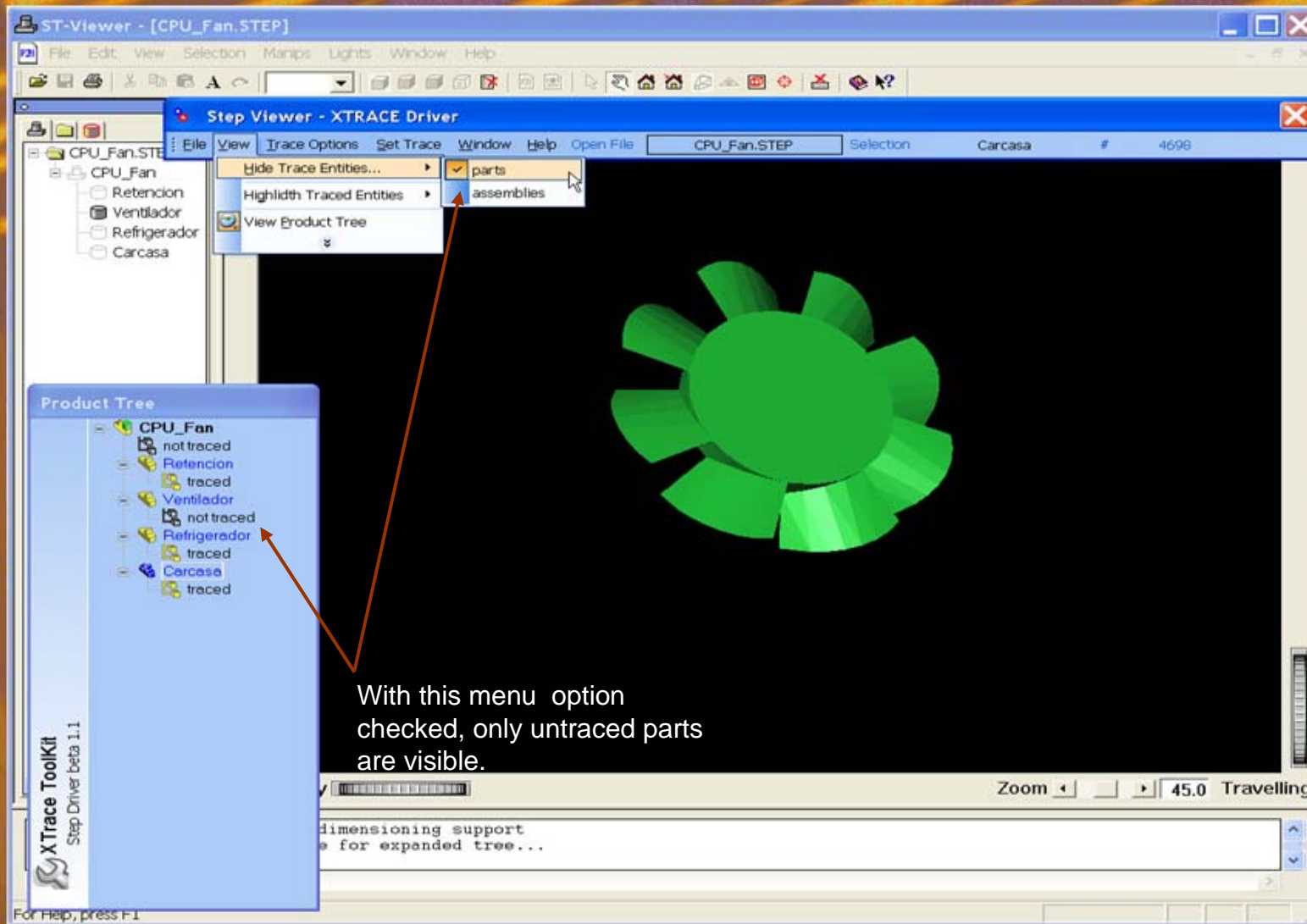
beta 1.0



Non traced elements are hidden. (click here to see how to hide traced entities)

# Xtrace Toolkit

beta 1.0



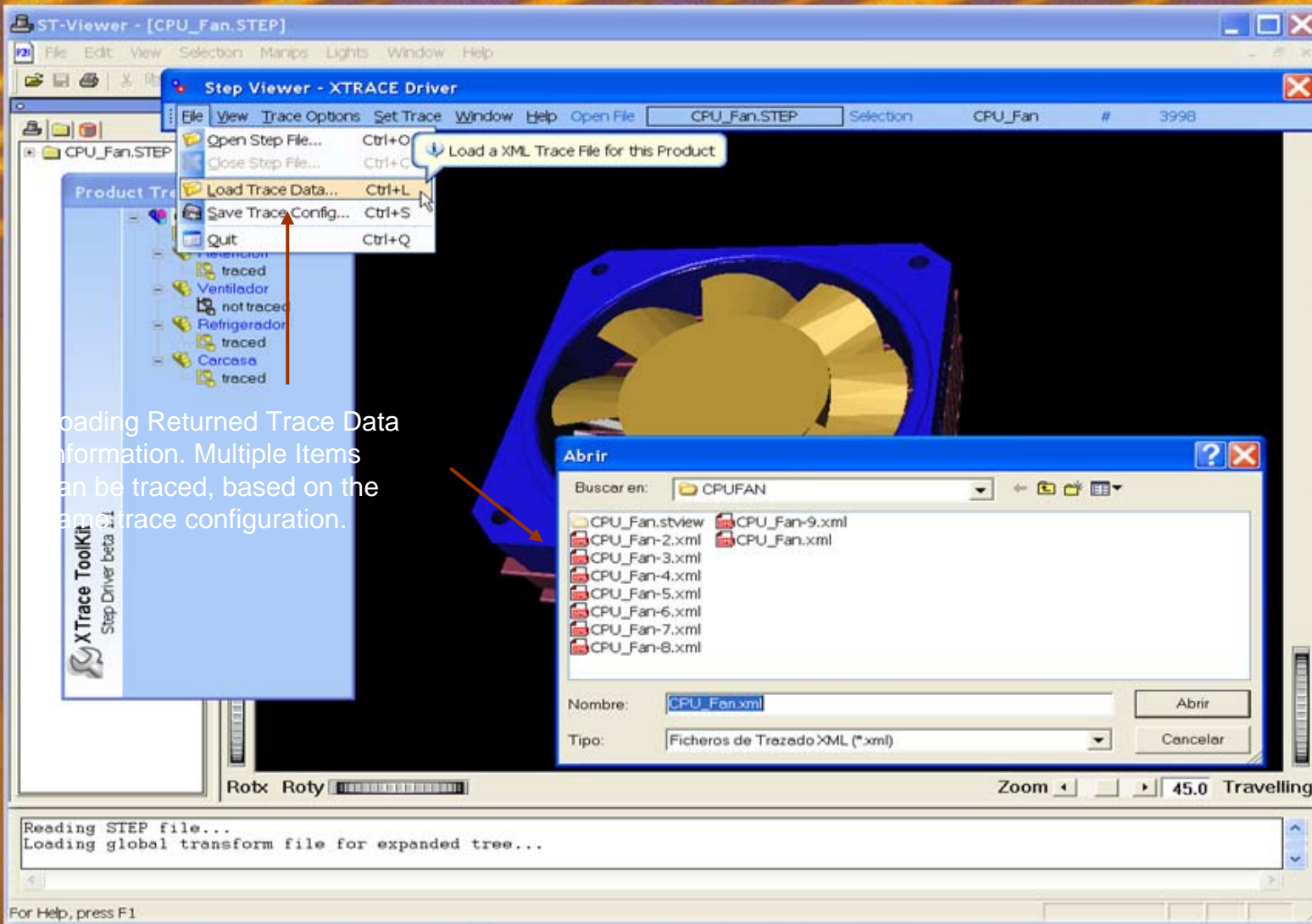


- **Tools: Main Features**

1. Trace Configuration for CAD entities.
2. Hide/Show CAD Entities depending on trace configuration state.
3. **Display Traced Data.**

# Xtrace Toolkit

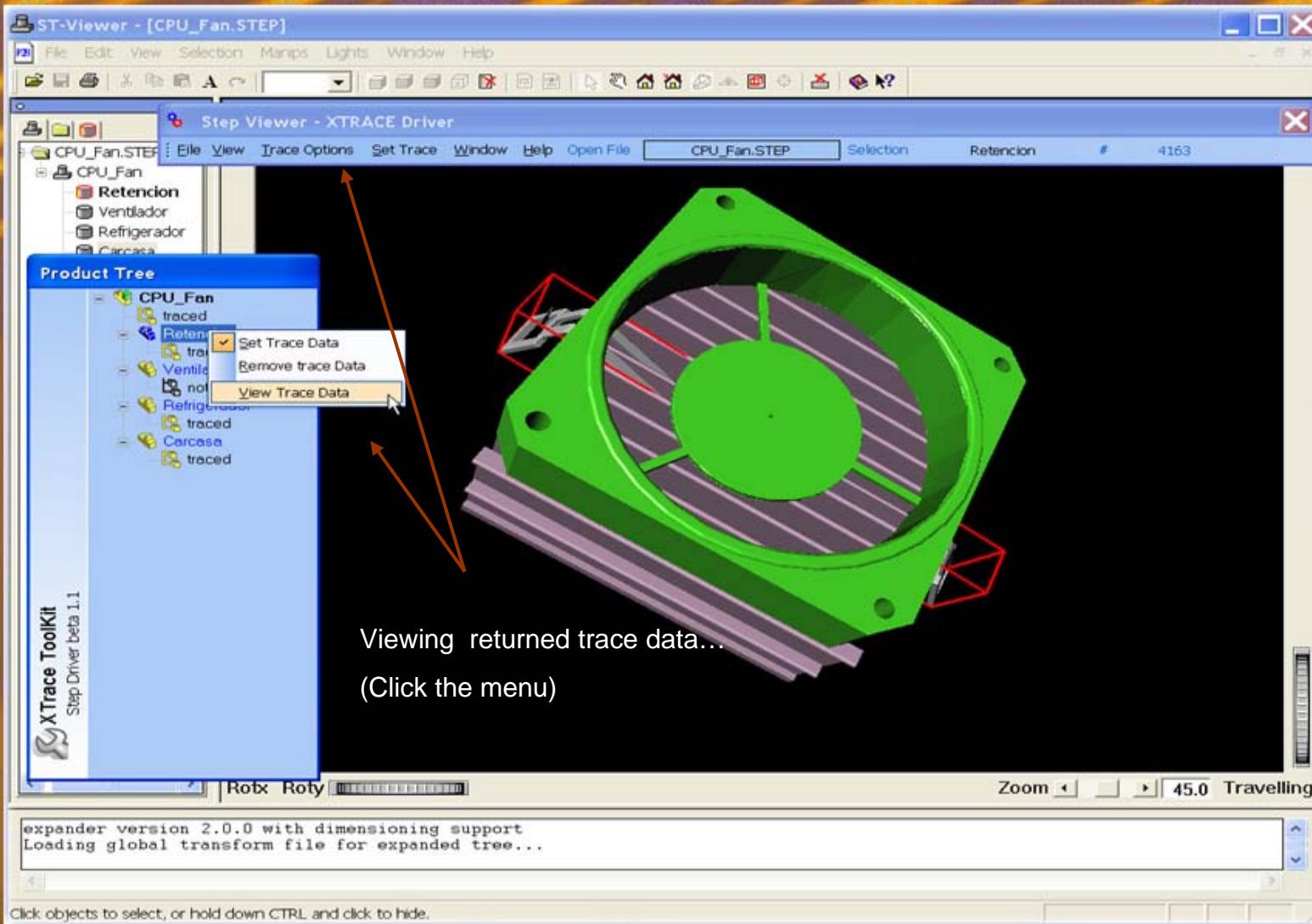
beta 1.0



loading Returned Trace Data  
Information. Multiple Items  
can be traced, based on the  
same trace configuration.

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Viewing returned trace data...  
(Click the menu)

# Xtrace Toolkit

beta 1.0

The screenshot displays the XTrace Toolkit interface. At the top, there are two windows: 'ST-Viewer - [CPU\_Fan.STEP]' and 'Step Viewer - XTRACE Driver'. The 'Step Viewer' window shows a 3D model of a fan assembly. On the left, a 'Product Tree' lists components: CPU\_Fan (traced), Retencion (traced), Ventilador (traced), Refrigerador (not traced), and Carcasa (traced). A 'Trace Data - Formatted XML Data' window is open at the bottom, showing details for the 'Retencion' part. The data includes Identity (1E43H534-98), Description (Mecanismo de Retencion metálico para ventiladores CPU), Trace Type (Item), Identity (8251347690-2003), and Start time (Sun Jan 04 12:49:00 2004). A 'View Xml Data' button is visible at the bottom right of the Trace Data window.

Raw XML file style is also available for viewing the data info.

(click the button for an example)

Data Info is a rich set of Part trace information. (click for an example)

Reference and Type Data	
Identity ::	1E43H534-98
Description ::	Mecanismo de Retencion metálico para ventiladores CPU.
Trace Type	<input checked="" type="radio"/> Item <input type="radio"/> Cheep <input type="radio"/> Item+Cheep
Identity ::	8251347690-2003
Start time ->	Sun Jan 04 12:49:00 2004

View Xml Data Close

# Xtrace Toolkit

beta 1.0

The screenshot displays the XTrace Toolkit interface. On the left is a 'Product Tree' with the following items: CPU\_Fan (traced), Retencion (traced), Ventilador (traced), Refrigerador (not traced), and Carcasa (traced). The main window shows a 3D model of a CPU fan. A 'Trace Data - Formatted XML Data' window is open, displaying the following information:

**Trace Data - Formatted XML Data**

<b>- Reference and Type Data</b>	
Identity ::	C42667GH2346
	Carcasa de Ventilador CPU
Description ::	
Trace Type	<input type="radio"/> Item <input checked="" type="radio"/> Cheep <input type="radio"/> Item+Cheep
<b>- Raw Materials List</b>	
Raw Material	
Identity ::	Plastico
Lot ::	L3456-2004
SubLot ::	12/0987
Quantity ::	150
Production Date ->	mié mar 03 13:13:00 2004
Caducity Date ->	mié mar 03 13:13:00 2004
Use Conditions	
Raw Material	
Raw Material	

An orange arrow points from the text 'Trace Data Info is physical implemented on Product Bar Codes.' to the 'Identity ::' field in the 'Raw Materials List' section of the 'Trace Data' window.

At the bottom of the interface, there is a status bar with the text: 'Reading STEP file... Loading global transform file' and 'Rotx Roty'. The XTrace Toolkit logo and version 'Step Driver beta 1.1' are visible in the bottom left corner.



# Xtrace Toolkit

beta 1.0

The screenshot displays the XTrace Toolkit interface. The main window shows a CAD model of a CPU fan assembly with a tree view on the left. The tree view includes components like CPU\_Fan, Retencion, Ventilador, Refrigerador, and Carcasa. The 'Carcasa' component is selected. A 'Trace Data - Raw XML Data Model' window is open, showing XML data for the selected component. An arrow points from the 'Carcasa' component in the tree to the XML data window. The XML data includes fields for identity, lot, slot, quantity, start/end dates, and transformation details.

Returned Raw XML for Entity

```
<TR_RAWMATERIALS>
  <TR_IDENTITY>Resina Sintética</TR_IDENTITY>
  <TR_LOTMATERIAL>
    <TR_LOTID>L9456-2004</TR_LOTID>
    <TR_SLOTID>14245-23</TR_SLOTID>
    <TR_QUANTITY>5</TR_QUANTITY>
  </TR_LOTMATERIAL>
  <TR_CADUCITY>
    <TR_START>2004-01-02T13:14:00-00:00</TR_START>
    <TR_END>2004-03-03T13:14:00-00:00</TR_END>
  </TR_CADUCITY>
  <TR_USECONDITIONS>
    <TR_TRANSFORMATION>Moldeado</TR_TRANSFORMATION>
    <TR_DATETIME>2004-03-03T13:16:00-00:00</TR_DATETIME>
    <TR_REMARKS>Informacion relativa a la trnsformación de
      moldeado</TR_REMARKS>
  </TR_USECONDITIONS>
</TR_RAWMATERIALS>
</TRACE>
```

Reference and Type Data	
- Raw Materials List	
Raw Material	
Raw Material	
Raw Material	
Identity ::	Resina Sintética
Lot ::	L9456-2004
SubLot ::	14245-23
Quantity ::	5
Production Date ->	Fri Jan 02 13:14:00 2004

- **Future Development ?**

1. Trace Configuration for machine Operations  
(Integration with AP 238)
2. Trazability information model in STEP?