

## Data Declaration System

What's new in Version 5.1.1?

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### **DDS Contact**

email: [dds@visu-it.de](mailto:dds@visu-it.de)

Internet: <http://www.visu-it.de/dds>



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Visual Information Technologies GmbH  
An der Schergenbreite 1  
93059 Regensburg

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## 1 Purpose and scope

This document describes the improvements and changes of DDS V5.1.1 compared to V5.1.0.

## 2 What's new in Version V5.1.1?

### 2.1 Highlights

#### 2.1.1 "Export DDX" improvements

Improvements:

- new XML Schema ("DDX1.3.xsd") containing "MODEL", "SW" and "DATADictionary" sections
- support of complex C data like "structure types", "structure instances" and "arrays"
- support of collections like "sourceSection" and "function"
- support of address-information
- support of memory regions, system constants (cDefines), etc.
- "PartialExportViaFunction" functionality
- etc.

**Note:** This special component is not included in the standard DDS installation but is available as Add'on.

#### 2.1.2 "Export to Ascet" improvements

Improvements:

- support of "Implementation" (Master)
- support of "Data" for Objects (e.g. distribution)

**Note:** This special component is not included in the standard DDS installation but is available as Add'on.

#### 2.1.3 "Export to TargetLink" improvements

Improvements:

- support of "system constant" (cDefine), "scalings" and "typedefs"
- support of configurable "MappingFile" using "Mapping"-Variable **\$FUNCTION\$**

Example:

```
<DDSTLMAP>
  <ENTITY Type="parameter">
    <DD Filter="INPUT">/Pool/Variables/$FUNCTION$/Input</DD>
    <DD Filter="OUTPUT">/Pool/Variables/$FUNCTION$/Output</DD>
    <DD Filter="LOCAL">/Pool/Variables/$FUNCTION$/Local</DD>
    <DD>/Pool/Variables/Parameters_Without_Function</DD>
    <KEYWORDS />
    <VARIABLECLASS>GLOBAL_PARAMETER</VARIABLECLASS>
  </ENTITY>
  <ENTITY Type="curve">
    <DD Filter="INPUT">/Pool/Variables/$FUNCTION$/Input</DD>
    <DD Filter="OUTPUT">/Pool/Variables/$FUNCTION$/Output</DD>
    <DD Filter="LOCAL">/Pool/Variables/$FUNCTION$/Local</DD>
    <DD>/Pool/Variables/Curves_Without_Function</DD>
    <KEYWORDS Kind="AXIS_PTS_X">AXIS_PTS_X,STD_AXIS,INDEX_INCR</KEYWORDS>
    <VARIABLECLASS>GLOBAL_CURVE</VARIABLECLASS>
  </ENTITY>
```

- ...
- support of "VariableClasses" and "keywords" via "MappingFile"
- support of "ExistingDBUpdateMode"-modes "Overwrite" and "UpdateOnly"

**Note:** This special component is not included in the standard DDS installation but is available as Add'on.

## 2.2 New Features, Major Improvements

### 2.2.1 ADD-Link: MaxRefresh

#### Improvements:

- full support of "MAX\_REFRESH" attribute in ADD and DDS  
-> for all instrumentation definitions (online, map, axis, parameter)
- import of attribute into DDS (during ImpADD run)
- support of proxy attribute "MAX\_REFRESH" in DDS
- support of (proxy-) attribute "MAX\_REFRESH" in ASAP2 export (ASAP2 Import does not yet support "MAX\_REFRESH")

### 2.2.2 ADD-Link: AccessFrequency

#### Improvements:

- full support of "AccessFrequency" attribute in ADD and DDS  
-> for all instrumentation definitions (online, map, axis, parameter)
- import of attribute into DDS (during ImpADD run)
- support of proxy attribute "AccessFrequency" in DDS
- support of (proxy-) attribute "AccessFrequency" in Source Export via configurable "instruction" definition (new filter option "HandleAccessFrequency")

### 2.2.3 ADD-Link: Axis-Online

#### Improvements:

- support of "online" on "axis" level in ADD
- import of attribute into DDS (during ImpADD run)
- support of proxy attribute "online" in DDS

### 2.2.4 ImpADD improvements

#### Improvements:

- new filter option "DefFile"  
Definition file (c-file) of the created 'real' DDS entities. You can also use a pattern with wildcard, e.g. "\_data.c" to create/use a c-file whose name is linked to the current DD container (default = 'Default Project Settings')
- new filter option "DeclFile"  
Declaration file (h-file) of the created 'real' DDS entities. You can also use a pattern with wildcard, e.g. "\_data.h" to create/use a h-file whose name is linked to the current DD container (default = 'Default Project Settings')

- new filter option "GenerateSWInterface"  
Generate a software interface for all INPUT data of the container. This interface is included in the declaration file of the module (container).

## 2.2.5 Support of new compiler "Greenhills C 2.1 [dual]"

The current DDS Version V5.1.1 officially supports the compiler "Greenhills C 2.1 dual" for PowerPC.

## 2.2.6 ExpA2

- new filter option "SkipInputDefinitions"  
Skip all definitions which are based on DDProxys which are exclusively referenced as 'INPUT' from one or more 'DDContainer' (that means that no "DDContainer" references the DDProxys as 'OUTPUT' or 'LOCAL')

## 2.3 Minor Improvements / Correction of Bugs

### 2.3.1 ExpSrc: Segmentation pragma + sourceSection

The Source Export filter is enhanced with the new filter option "SegmentationPragmaWithinSourceSection". If this filter option is set, the Source Export writes the segmentation pragma directly at the entity even when it is within a sourceSection.

### 2.3.2 ExpSrc: Map-Axis define

The "map – axis define" is not generated/written during Source Export when the map – axis reference is based/inherited on DD proxies. This problem is fixed now.

### 2.3.3 ExpSrc

- support of ".f" with float32 definitions
- fix of problem with "reserved" inside mapping scheme

### 2.3.4 InstrPro

- support of "error-pragma" via new filter option "MissingEntityMode"
- configurable line-directive
- keep lines when label interface is missing

### 2.3.5 SemI

- support of new DDS variables "<x>.Parent.<y>"

### 2.3.6 ImpA2

- improvement of bitfield-detection
- support of array of '1'
- toleration of "map array elements using different axes"
- toleration of invalid ASAP2 functions
- toleration of "axes with undefined onlines"
- detection and toleration of 'mixed' multi-dimensional VAL\_BLK arrays

### 2.3.7 ImpADD

The Import ADD filter is enhanced with the new filter option "CreateLegacyConversionNames". If this filter option is set, a new syntax for the generation of conversion names is applied: The normal 15 digit formatting is kept but numbers which have less than 6 digits after the comma are filled with '0' characters.

V5.1.0	LINEAR [-2147483648, 80000000H] [2147483647, 7FFFFFFFH]
V5.1.1	LINEAR [-2147483648. <b>000000</b> , 80000000H] [2147483647. <b>000000</b> , 7FFFFFFFH]

### 2.3.8 ImpCVX

In DDS V5.1.0, the init values of definitions with the representation model "3\_Ascii" are not correctly imported. This problem is fixed in V5.1.1.

### 2.3.9 ExpA2

- "PartialExportViaFunction" fix

### 2.3.10 ODX Flash - hexBinary

- fix of "hexBinary" numbers during "Export ODX FLASH"

### 2.3.11 GenEdit

- Up to now, the init values of maps and axes are not explicitly stored in the DDS database when they are all set to '0'. This is because '0' is the default value for the Source Export. In DDS 5.1.0 this default value was changed from '0' to <minimum value of data range> (taking into account the dataType limits, conversion limits, upper/lower-Limits). Therefore it is now necessary to explicitly store the value '0' if set by the user.  
-> this is now done in V5.1.1

### 2.3.12 CmpMrg

- When running the CmpMrg filter in command line performing the 'Merge'-mode, the filter now returns "no success" whenever the merge is not performed and committed (due to some merge conflicts). In previous versions, the filter returned 'success'.

## 3 No longer supported filters/components

## 4 Questions?

If you have any questions about this release, please contact the Visu-IT! DDS Hotline:

#### DDS Hotline

Tel.: +49 (0)9943 – 943563  
email: [dds-hotline@visu-it.de](mailto:dds-hotline@visu-it.de)

#### DDS Contact

Tel.: +49 (0)9943 – 943561  
email: [dds@visu-it.de](mailto:dds@visu-it.de)

#### DDS Product page

Internet: <http://www.visu-it.de/dds>