

2. Issues

2.1 Issue 1: Config 1 / Config 2

2.1.1 Problem

During the CIP *Forward_Open* service an optional data segment can be appended to the path attribute of this service. The Config1 and Config2 elements in FDT CIPDTMParameterSchema are intended to be used to transfer this information from the Device DTM to the parent (Master) DTM. Within the Config1 and Config2 elements it is possible to use the <cip:ParameterReference> or the <fdt:ChannelReference> elements to reference the data which should be transferred as Config1 and Config2.

For the <cip:ParameterReference> element the CIP Annex document gives no statement to which kind of parameter this element should reference and what kind of data type is behind this reference. Also the handling of the <fdt:ChannelReference> element to reference the adequate data is not clear.

2.1.2 How to handle

During the CIP *Forward_Open* service the data segments given Config1 and Config2 are appended to the path attribute of this service. The path of the service is represented by the <cip:ePath> attribute in the <CIPConnection> element of the FDT CIPDTMParameterSchema. The <cip:ePath> attribute is defined in DTMCIPDataTypeSchema as bin.hex data type.

Since the definition of the Config1 and Config2 use is not clear in the CIP Annex for FDT, it is recommended to concatenate the configuration buffers config1 and config2 to the <cip:ePath> attribute in the element <CIPConnection> if required.

To be more near from the CIP forward_open request (See 3-5.5.1.11 Connection Path in ODVA CIP Specification v3.5 and example “table 3-5.15”) the buffers shall be concatenated like the following example:

<cip:ePath> + 0x80 + <size of the configuration buffers config1 and config2 in words> + Config1 + Config2 + [0x0 if size of the configuration buffers config1 and config2 is not modulo 2]

The configuration buffers config1 and config2 are concatenated with a leading separator (0x80) and the configuration sizes in words (config1+config2) and a trailing settlement if the size of the configuration buffers is not modulo 2

The <Format> element of <Config1> and <Config2> shall not be used.

2.1.3 How to proceed

The FDT Group will be asked to clarify the Annex document. Nevertheless the solution described above should work in every case.