TECHNICAL NOTE

YASKAWA

Title: ESI File Modification

Product(s): Yaskawa SERVOPACKs with CANopen over EtherCAT | **Doc. No.** TN.MCD.16

TABLE OF CONTENTS

Title: ESI File Modification	
Product(s): Yaskawa SERVOPACKs with CANopen over EtherCAT	**Doc. No.** TN.MCD.16

1. About This Document

This document shows examples of ESI file modification.
ESI file modification may be necessary for the following cases:

1. Master enforces PDO mapping exclusion (example: Omron Sysmac Studio).
   Masters enforcing PDO mapping exclusion prevents enabling simultaneous PDO mappings.
   For SGDV, enabling simultaneous PDO mappings allows mapping up to 16 objects for Tx PDO mapping and 16 objects for Rx PDO mapping.
2. User does not want to use master functions to modify PDO mappings.
3. Master does not support PDO mapping modification.

2. Equipment

Obtain the following:

1. Yaskawa ESI file to modify.
   - Yaskawa.com document number Yaskawa_CoE_ESI_Files.
2. XML editor.
   - Example: XML Notepad 2007 (Microsoft)

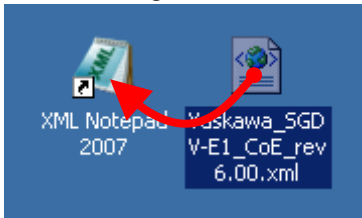| **Title:** ESI File Modification	
Product(s): Yaskawa SERVOPACKs with CANopen over EtherCAT	**Doc. No.** TN.MCD.16

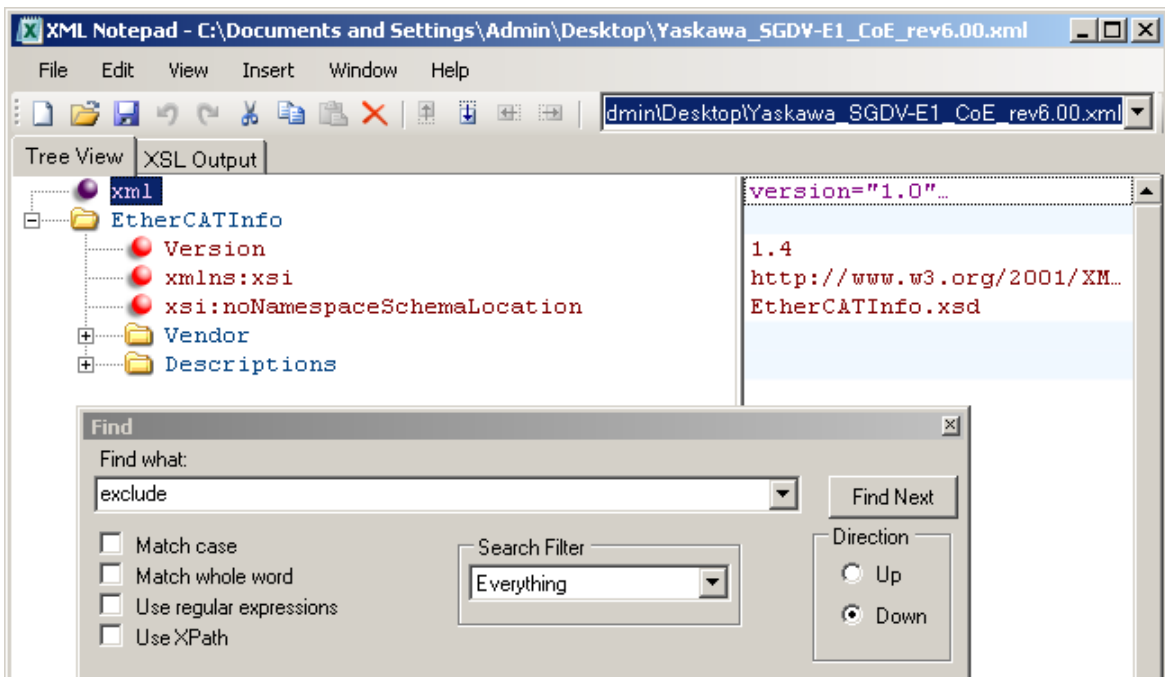### 3. Example: Modify ESI To Support Enabling Simultaneous PDO Mappings

Masters may disable simultaneous PDO mappings if they process the "Exclude" tag in the ESI file.

This example shows removal of the "Exclude" tag.

1. Click & drag the ESI file onto the XML editor.

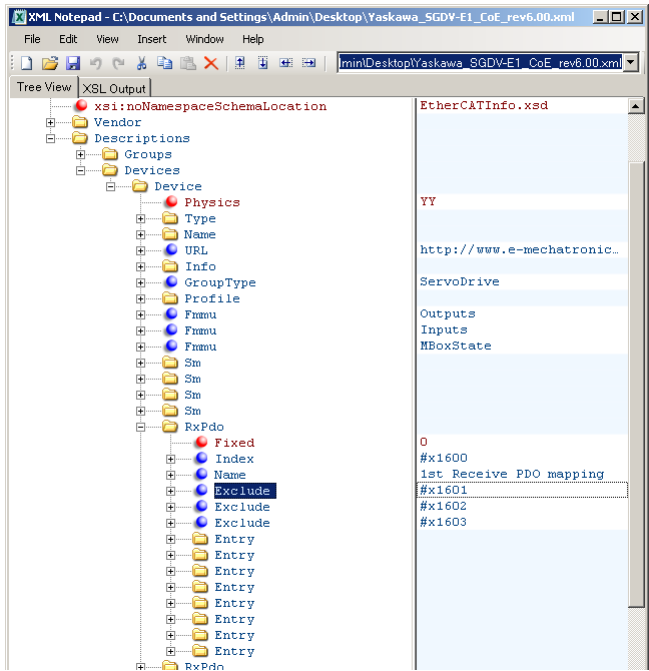2. Perform the "Find" function to search for "exclude".
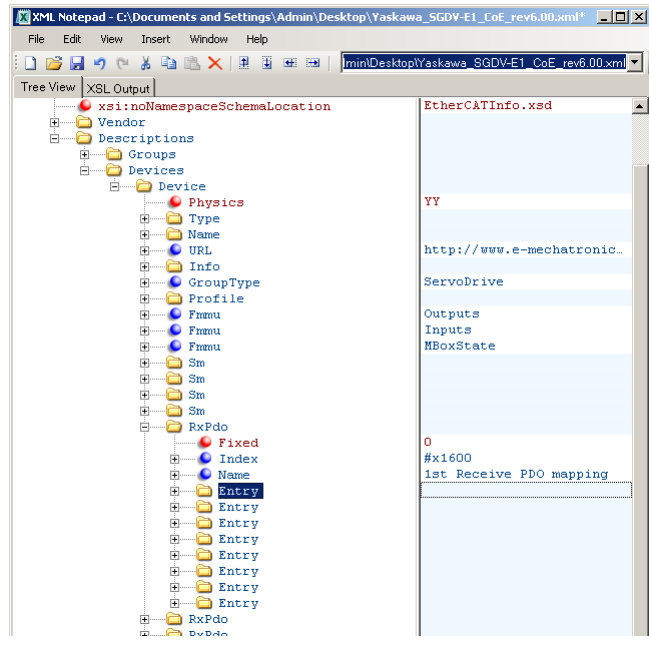
Title: ESI File Modification

Product(s): Yaskawa SERVOPACKs with CANopen over EtherCAT	**Doc. No.** TN.MCD.16

3. Delete the "Exclude" tags for all instances in the ESI file.
   For SGDV, the "Exclude" tag appears 3 times in each PDO mapping (8 PDO mappings total).

Before: "Exclude" appears 3 times in a PDO map.	After: "Exclude" has been removed from the PDO map.

4. Save the file and load the file into the EtherCAT master, replacing any previous ESI file.
5. If the master does not allow the user to enable multiple PDO maps at this point (as with the Omron EtherCAT Master), the ESI file may need further modification.
   Refer to the example, "**5. Example: Modify ESI To Support Enabling Simultaneous PDO Mappings – Additional Modification**".

Title: ESI File Modification

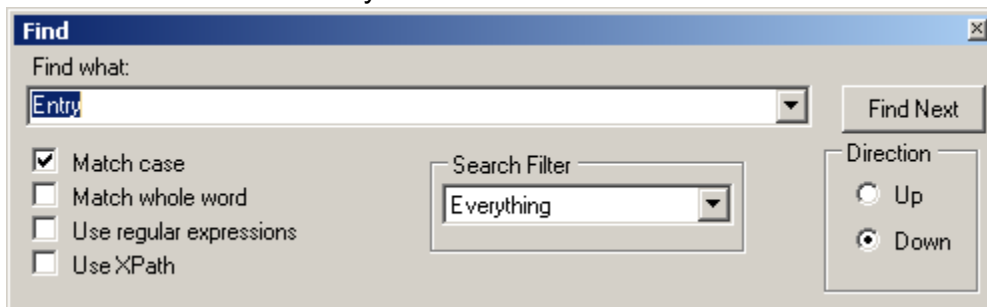**Product(s):** Yaskawa SERVOPACKs with CANopen over EtherCAT | **Doc. No.** TN.MCD.16

4. Example: Modify ESI To Support Enabling Simultaneous PDO Mappings – Additional Modification

Masters may disable simultaneous PDO mappings if the PDO mappings contain the same PDO (for example, if Controlword is in the 2nd and 3rd PDO mappings, the master will enforce PDO mapping exclusion).

This example shows removal of the PDOs from the PDO mappings.

1. With the file loaded into the XML editor (refer to "**3. Example: Modify ESI To Support Enabling Simultaneous PDO Mappings**" above), perform the "Find" function to search for "Entry" and match case.
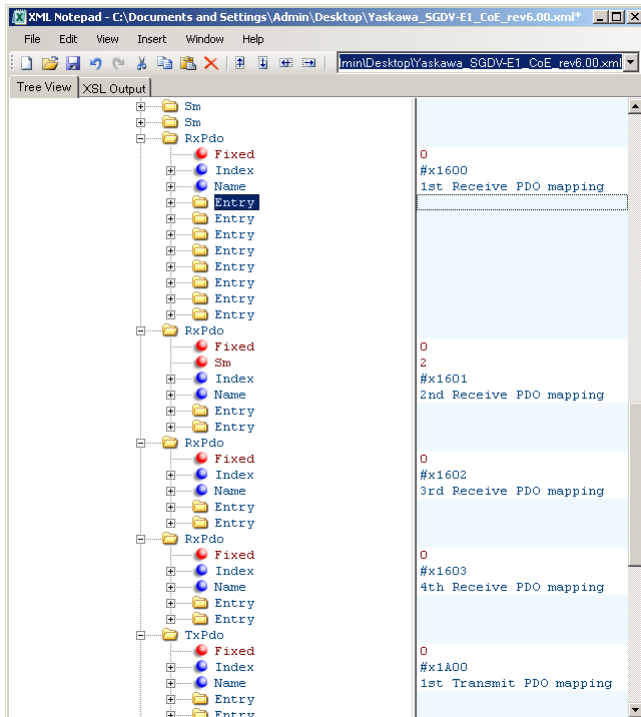
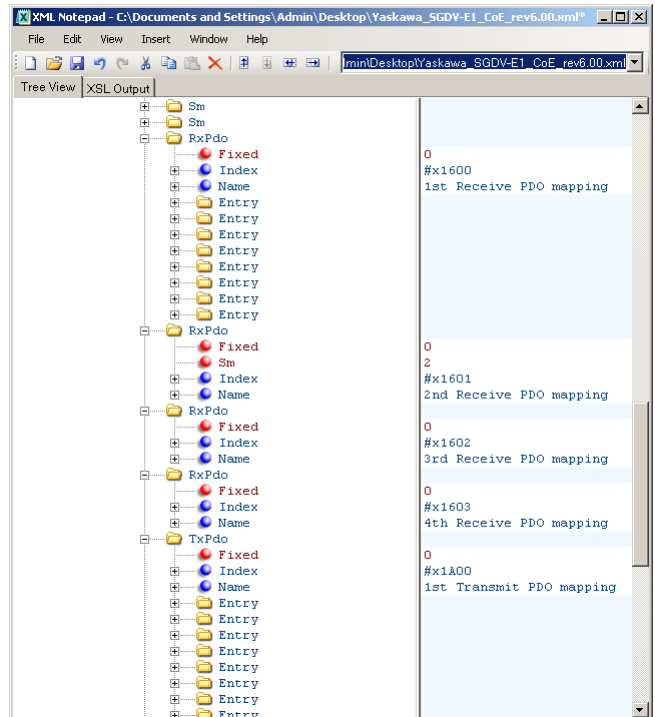| **Title:** ESI File Modification	
Product(s): Yaskawa SERVOPACKs with CANopen over EtherCAT	**Doc. No.** TN.MCD.16

2. Remove the "Entry" tag from the 2nd, 3rd, and 4th Receive PDO mappings, and also from the 2nd, 3rd, and 4th Transmit PDO mappings.
   "Entry" tags can remain in any PDO mapping, but for this example, the 1st PDO mapping was chosen to retain Entry tags.

Before:
"Entry" appears in 2nd, 3rd, and 4th PDO mappings.

After:
"Entry" has been removed from the 2nd, 3rd, and 4th Receive PDO mappings
(but not removed from the 1st Receive PDO mapping).

3. Save the file and load the file into the EtherCAT master, replacing any previous ESI file.

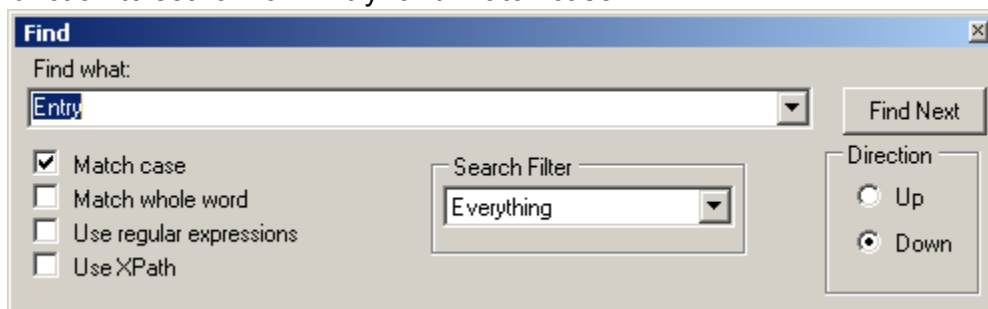| **Title:** ESI File Modification	
Product(s): Yaskawa SERVOPACKs with CANopen over EtherCAT	**Doc. No.** TN.MCD.16

5. Example: Modify ESI For Custom PDO Content

Certain masters may not support PDO map modification, or the user may not want to use that function.
This example shows the modification of the ESI file for custom PDO content.

1. With the file loaded into the XML editor (refer to "**3. Example: Modify ESI To Support Enabling Simultaneous PDO Mappings**" above), perform the "Find" function to search for "Entry" and match case.
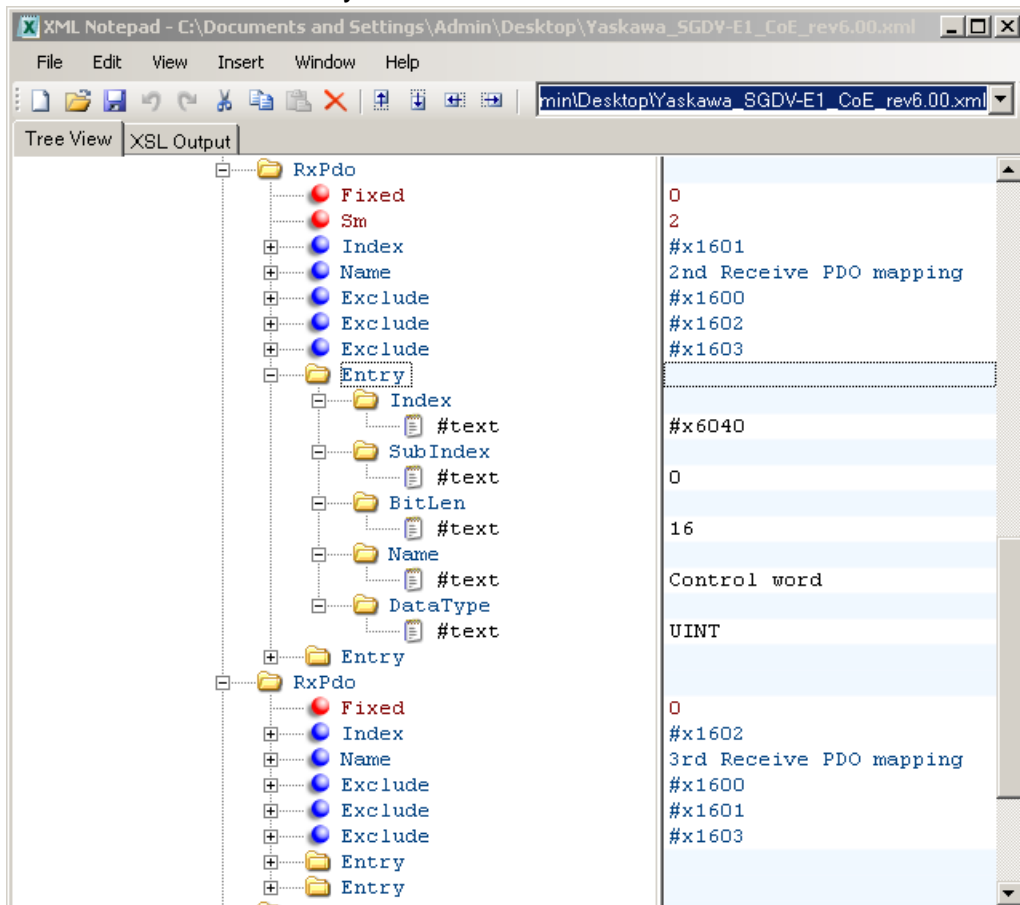
TECHNICAL NOTE

YASKAWA

Title: ESI File Modification	
Product(s): Yaskawa SERVOPACKs with CANopen over EtherCAT	**Doc. No.** TN.MCD.16

2. The area of content that is to be modified is displayed.
   Expand the Entry tag within the PDO map to be modified, to view the Entry contents.
   Also, expand all content in the Entry.
   In this example, the first Entry in the 2nd Receive PDO mapping is expanded as well as the content in the Entry.

3. Modify the contents in the Entry to the desired content following the format described in EtherCAT document ETG.2000.
   Consider following the format that exists in the ESI file.