CPRI mapper clarifications and corrections for control word handling

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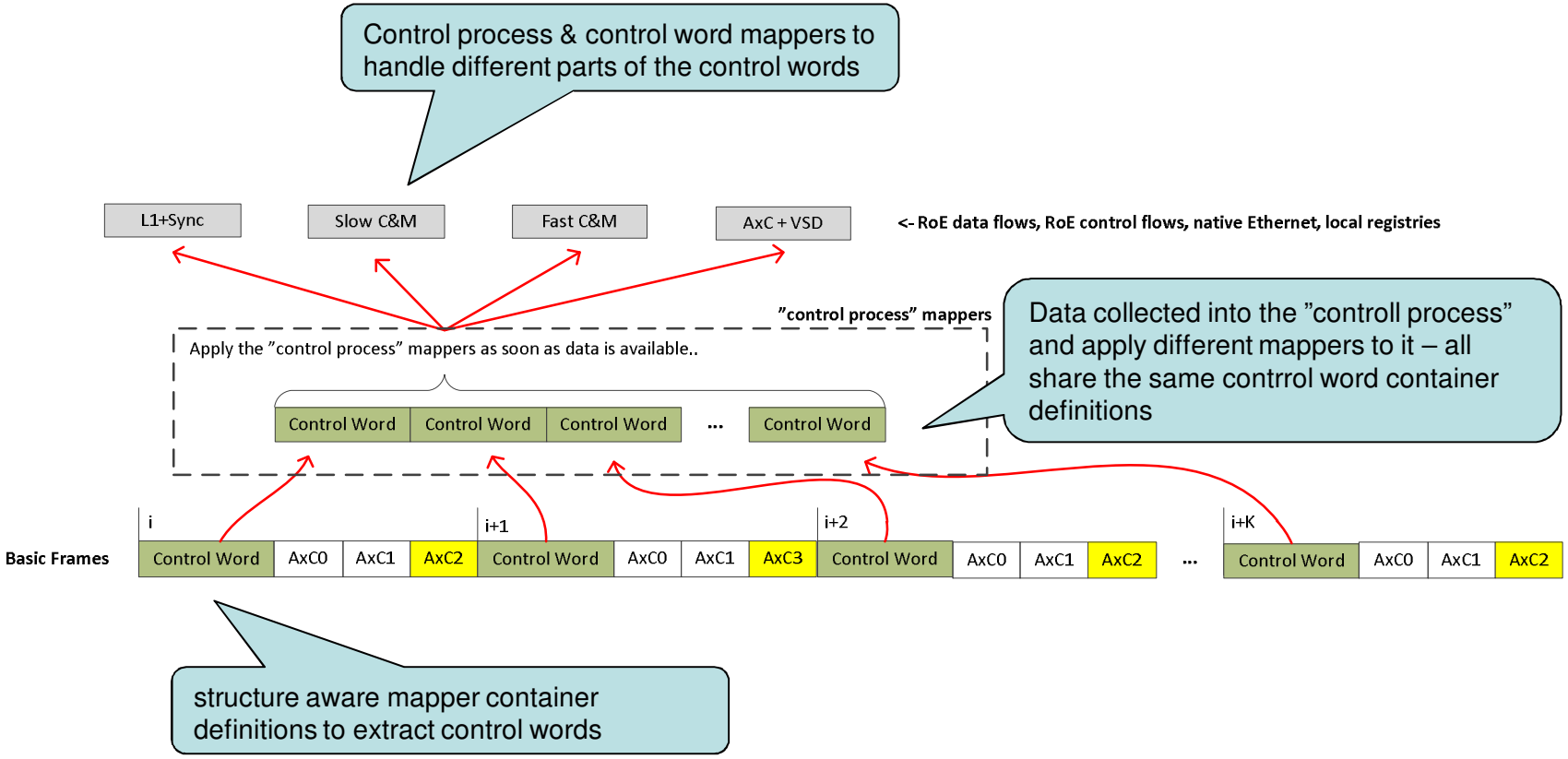
Background

- This contribution further defines structure aware CPRI mappers control word handling:
  - Adds clarifying figures for Slow and Fast C&M handling.
  - Prepared for the Ctrl_AxC and VSD handling.

- The text and figures proposals to D0.2 are detailed in tf3_korhonen_cw_draft_change_1.docx

Control words processing



control word container definition

- Same container for different mappers:
  - Synchronization and L1 protocol fields
  - Slow C&M channel
  - Fast C&M channel
  - Combined VSD and Ctrl_AxC channels

Ns =	Xs = 0	1	2	3
0	Sync	&	tim..	..ing
1	Slow	C&M	Slow	C&M
2	L1	L1		p
3	Re	ser	ved	...
4	Ctrl	...	...	

```
container
{
        .cw_sel
        .cw_start
        .cw_num
        .cw_size
        .flow_id
        .filter_mode
        .hfn_modulo
        .hfn_index
        .offset
        .value
        .mask
}
```

Select Xs

First Ns

Num Ns

Octets CW

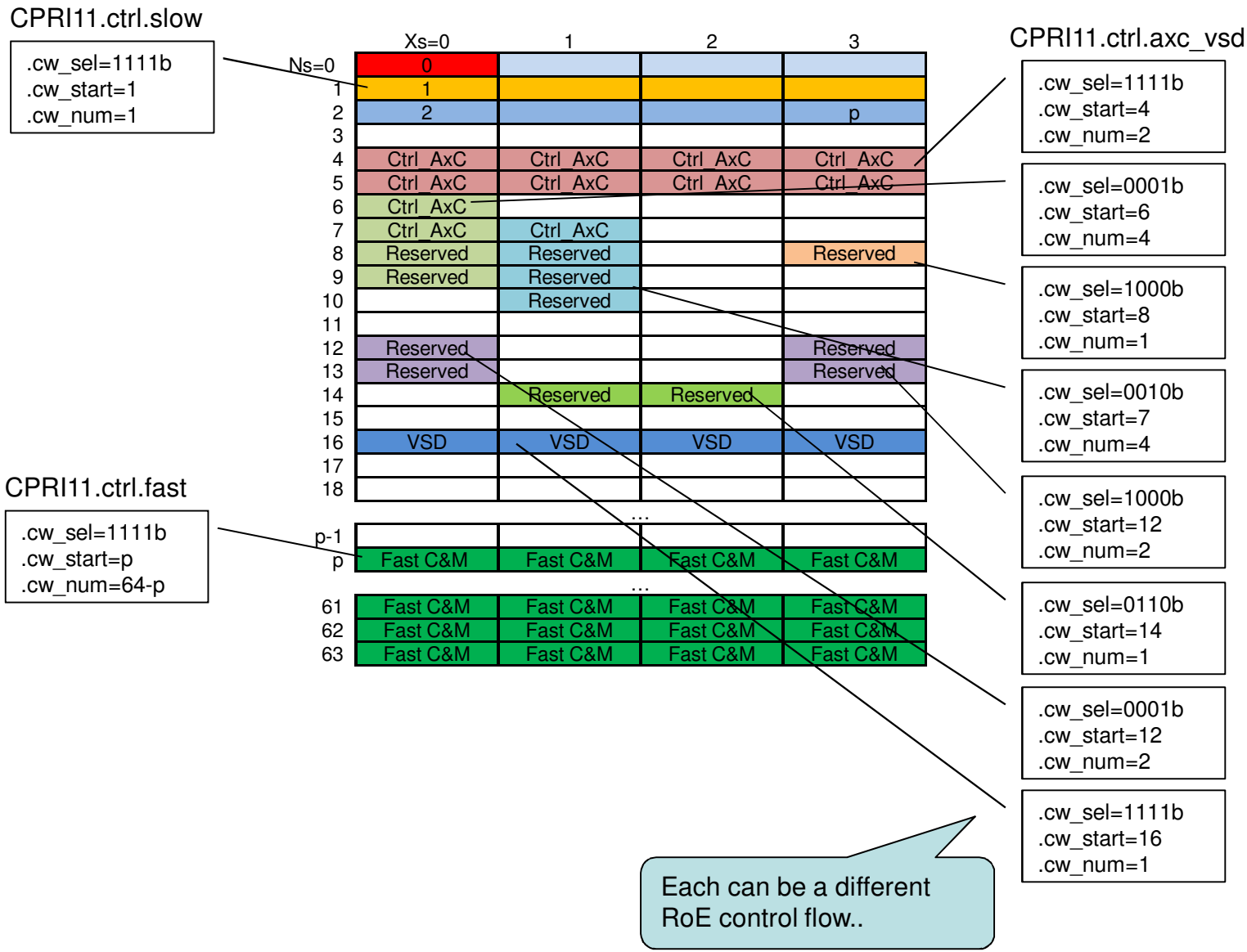
- Overlapping containers not permitted.

Ctrl_AxC and VSD

- Why ”complex” container rules for Ctrl_AxC and VSD as well?
  - Timely sending of partial data e.g. in case of Ctrl_AxC information.
  - Allow switching Ctrl_AxC and VSD along with AxC flows to different receivers i.e., the endpoint for different flows may have different Eth DA.. not possible to send data always to the same place.

- Sent over RoE control packets
  - flow_id defines the container definition.

Examples..


CPRI11.ctrl.slow
.cw_sel=1111b
.cw_start=1
.cw_num=1
CPRI11.ctrl.fast
.cw_sel=1111b
.cw_start=p
.cw_num=64-p
Xs=0
1
2
3
Ns=0
0
1
2
p
Ctrl_AxC
Reserved
VSD
Fast C&M
p-1
CPRI11.ctrl.axc_vsd
.cw_sel=1111b
.cw_start=4
.cw_num=2
.cw_sel=0001b
.cw_start=6
.cw_num=4
.cw_sel=1000b
.cw_start=8
.cw_num=1
.cw_sel=0010b
.cw_start=7
.cw_num=4
.cw_sel=1000b
.cw_start=12
.cw_num=2
.cw_sel=0110b
.cw_start=14
.cw_num=1
.cw_sel=0001b
.cw_start=12
.cw_num=2
.cw_sel=1111b
.cw_start=16
.cw_num=1
Each can be a different RoE control flow..

Discussion & Proposal

- Agree the Ctrl_AxC and VSD control word handling baseline and document it then to the next specification version.