Abstract
«Names of XCHAN implementations»

Two names of possible XCHAN implementations are suggested. In The original presentation (Teig, CPA-2012) describes the «classic» scheme where the xchan-ready channel is used only if the original sending fails. The occam-pi model (Welch, CPA-2013 fringe) uses the «preconfirmed» scheme, where a signal on xchan-ready is a necessary precondition to any communication. It is believed that FEATHERING (Teig, CPA-2013) seems to be possible only with the classic scheme.

Fringe CPA-2013 (*)

- All of Peter Welch's senders get xchan-ready (true) when the connection with the receiver was committed. After xchan-ready (true) the sender must send, and this is the only place to send. This algorithm also fully implements the original XCHAN semantics. We could call this the «**preconfirmed**» solution

- The original XCHAN paper may start sending any time, but if sending fails then the xchan-ready is signalled when the connection with the receiver is fully committed. So, this «**classic**» solution only uses xchan-ready to send after an initial failure

Attempt to model in CSPm with FDR2

- A model of this has been (attempted) to be developed in CSPm, verified with FDR2

- It also models the **preconfirmed** solution

- Since the **classic** solution probably also includes modeling the scheduler as well as the internal synchronization of the ALT. Much more complicated

- Did not succeed with simulating PRI ALT in CSPm, but Thomas Gibson-Robinson and Michael Goldsmith today told that «prioritise(..)» will do it

(*) Lecture NTNU
"Becoming textual: attempting to model 'XCHAN' with CSPm"
"Using FDR2 and ProBE tools when state-ing is not enough"

Presented in a blog note at http://www.teigfam.net/oyvind/home/technology/063-lecture-ntnu/
Read presentation at http://www.teigfam.net/oyvind/blog_notes/063/Teig_at_NTNU_2013_08.pdf

«Feathering» (tomorrow)

- I think can only be done with the **classic** XCHAN solution