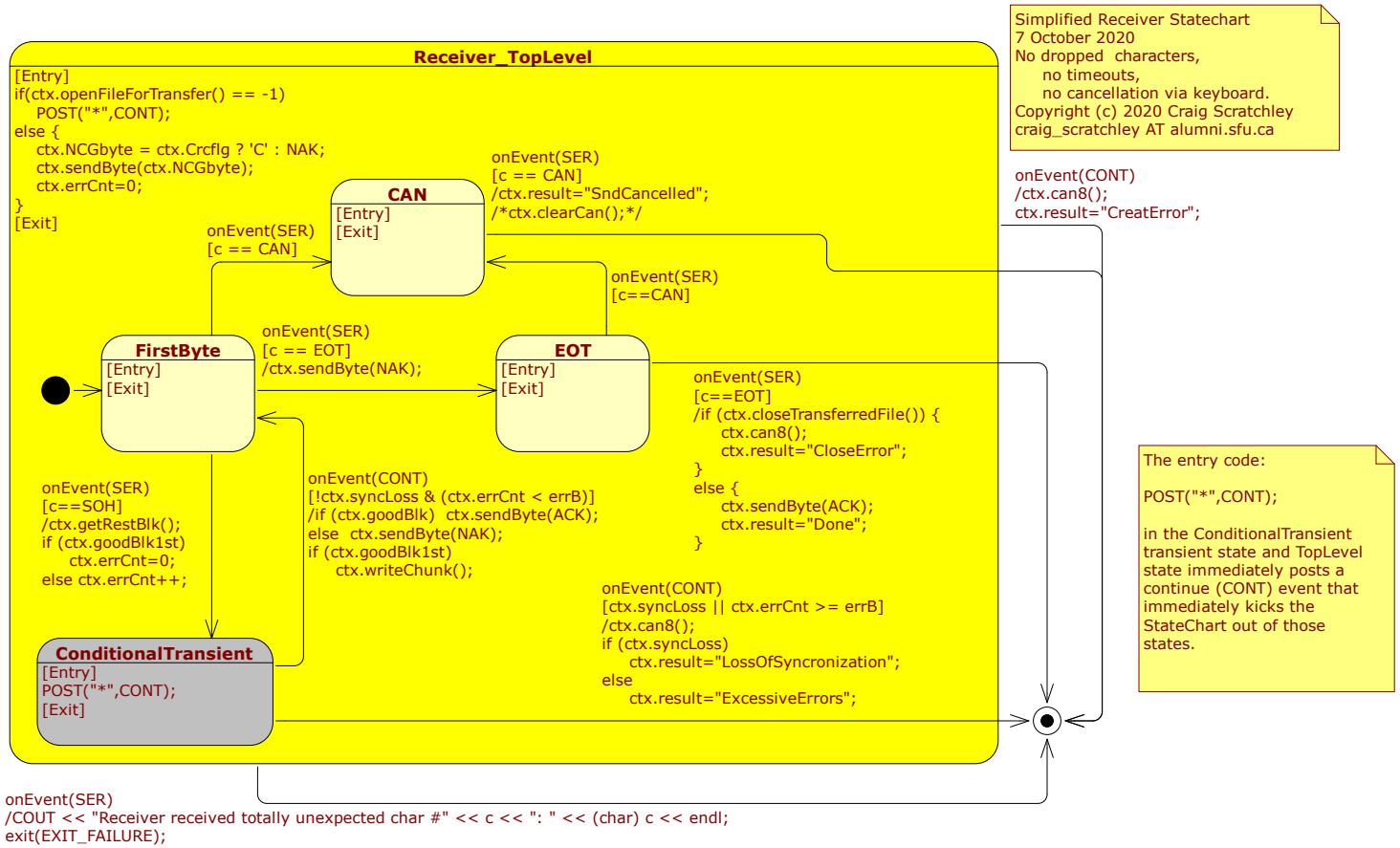
Simplified Receiver Statechart
7 October 2020
No dropped characters,
no timeouts,
no cancellation via keyboard.
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craig_scratchley AT alumni.sfu.ca
Receiver_TopLevel
[Entry]
if(ctx.openFileForTransfer() == -1)
POST("*",CONT);
else {
ctx.NCGbyte = ctx.Crcflg ? 'C' : NAK;
ctx.sendByte(ctx.NCGbyte);
ctx.errCnt=0;
}
[Exit]
CAN
[Entry]
[Exit]
onEvent(SER)
[c == CAN]
/ctx.result="SndCancelled";
/*ctx.clearCan();*/
onEvent(CONT)
/ctx.can8();
ctx.result="CreatError";
onEvent(SER)
[c == CAN]
onEvent(SER)
[c==CAN]
FirstByte
[Entry]
[Exit]
onEvent(SER)
[c == EOT]
/ctx.sendByte(NAK);
EOT
[Entry]
[Exit]
onEvent(SER)
[c==EOT]
/if (ctx.closeTransferredFile()) {
ctx.can8();
ctx.result="CloseError";
}
else {
ctx.sendByte(ACK);
ctx.result="Done";
}
onEvent(SER)
[c==SOH]
/ctx.getRestBlk();
if (ctx.goodBlk1st)
ctx.errCnt=0;
else ctx.errCnt++;
onEvent(CONT)
[!ctx.syncLoss & (ctx.errCnt < errB)]
/if (ctx.goodBlk) ctx.sendByte(ACK);
else ctx.sendByte(NAK);
if (ctx.goodBlk1st)
ctx.writeChunk();
onEvent(CONT)
[ctx.syncLoss || ctx.errCnt >= errB]
/ctx.can8();
if (ctx.syncLoss)
ctx.result="LossOfSyncronization";
else
ctx.result="ExcessiveErrors";
ConditionalTransient
[Entry]
POST("*",CONT);
[Exit]
The entry code:
POST("*",CONT);
in the ConditionalTransient transient state and TopLevel state immediately posts a continue (CONT) event that immediately kicks the StateChart out of those states.
onEvent(SER)
/COUT << "Receiver received totally unexpected char #" << c << ": " << (char) c << endl;
exit(EXIT_FAILURE);