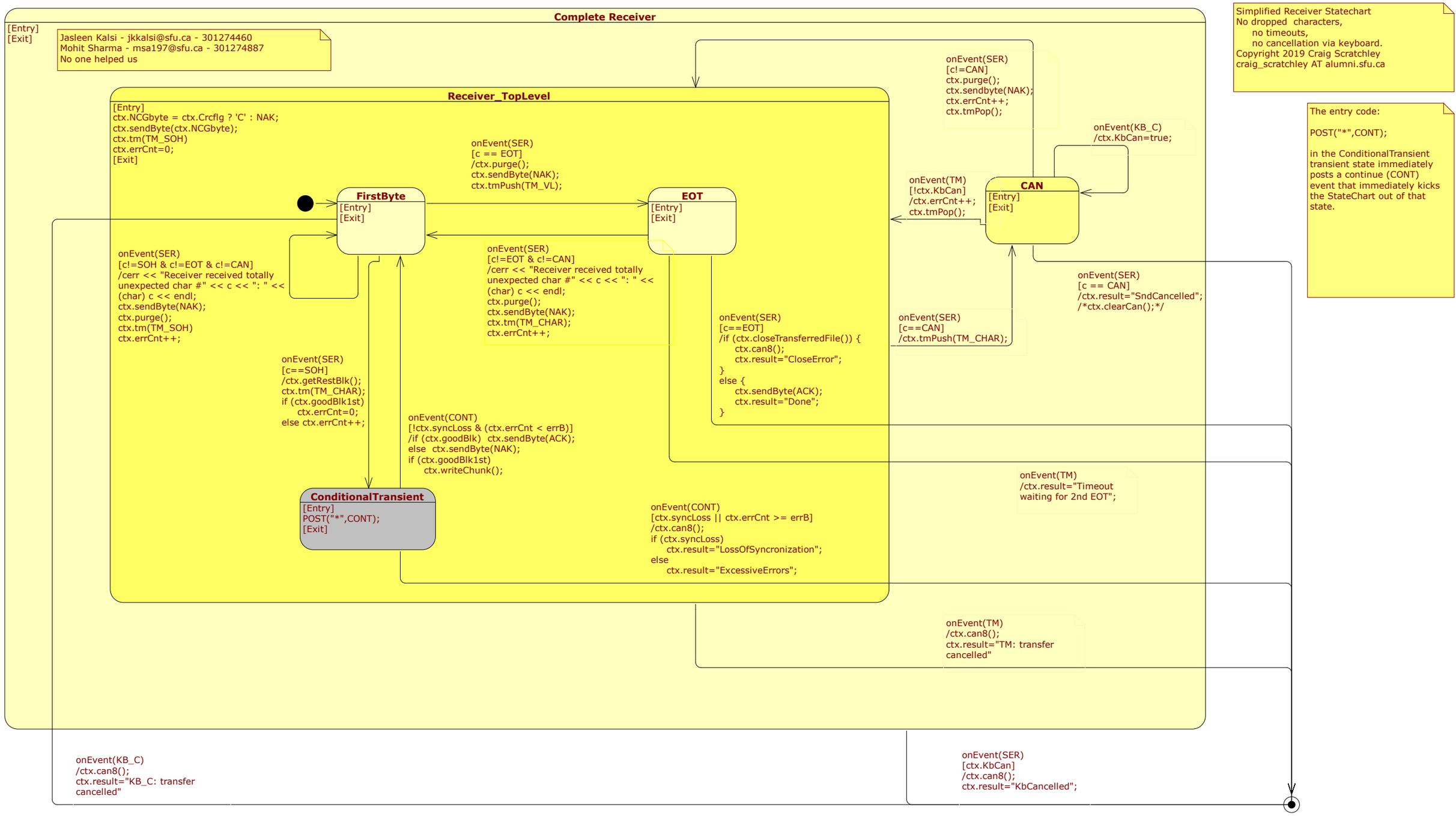
Complete Receiver
[Entry]
[Exit]
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No one helped us
Simplified Receiver Statechart
No dropped characters,
no timeouts,
no cancellation via keyboard.
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The entry code:
POST("*",CONT);
in the ConditionalTransient transient state immediately posts a continue (CONT) event that immediately kicks the StateChart out of that state.
Receiver_TopLevel
[Entry]
ctx.NCGbyte = ctx.Crcflg ? 'C' : NAK;
ctx.sendByte(ctx.NCGbyte);
ctx.tm(TM_SOH)
ctx.errCnt=0;
[Exit]
onEvent(SER)
[c == EOT]
/ctx.purge();
ctx.sendByte(NAK);
ctx.tmPush(TM_VL);
FirstByte
[Entry]
[Exit]
EOT
[Entry]
[Exit]
CAN
[Entry]
[Exit]
onEvent(SER)
[c!=CAN]
ctx.purge();
ctx.sendbyte(NAK);
ctx.errCnt++;
ctx.tmPop();
onEvent(KB_C)
/ctx.KbCan=true;
onEvent(TM)
[!ctx.KbCan]
/ctx.errCnt++;
ctx.tmPop();
onEvent(SER)
[c!=SOH & c!=EOT & c!=CAN]
/cerr << "Receiver received totally
unexpected char #" << c << ": " <<
(char) c << endl;
ctx.sendByte(NAK);
ctx.purge();
ctx.tm(TM_SOH)
ctx.errCnt++;
onEvent(SER)
[c!=EOT & c!=CAN]
/cerr << "Receiver received totally
unexpected char #" << c << ": " <<
(char) c << endl;
ctx.purge();
ctx.sendByte(NAK);
ctx.tm(TM_CHAR);
ctx.errCnt++;
onEvent(SER)
[c == CAN]
/ctx.result="SndCancelled";
/*ctx.clearCan();*/
onEvent(SER)
[c==EOT]
/if (ctx.closeTransferredFile()) {
ctx.can8();
ctx.result="CloseError";
}
else {
ctx.sendByte(ACK);
ctx.result="Done";
}
onEvent(SER)
[c==CAN]
/ctx.tmPush(TM_CHAR);
onEvent(SER)
[c==SOH]
/ctx.getRestBlk();
ctx.tm(TM_CHAR);
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();
ConditionalTransient
[Entry]
POST("*",CONT);
[Exit]
onEvent(TM)
/ctx.result="Timeout
waiting for 2nd EOT";
onEvent(CONT)
[ctx.syncLoss || ctx.errCnt >= errB]
/ctx.can8();
if (ctx.syncLoss)
ctx.result="LossOfSyncronization";
else
ctx.result="ExcessiveErrors";
onEvent(TM)
/ctx.can8();
ctx.result="TM: transfer
cancelled"
onEvent(KB_C)
/ctx.can8();
ctx.result="KB_C: transfer
cancelled"
onEvent(SER)
[ctx.KbCan]
/ctx.can8();
ctx.result="KbCancelled";