**MCCF EDI TAS US187**

System Design Document



Department of Veterans Affairs

**December 2016**

Version 1.0

**User Story Number:** USRX-13A

**User Story Name:** Default item number 1.1 when only one reject is listed on the ECME User Screen

**Product Backlog ID:** 174

**Backlog Priority:** Low

**Initial Sizing Estimate:**

**Rational ID:** tbd

**Rally ID:** US187

# Design

The story calls for defaulting the item number at the Select Item prompt for 13 actions on the ECME User Screen and 10 actions on the Further Research Screen. All of these actions share code for prompting the user to enter an item and then checking the user’s response for validity.

This design calls for creating a new subroutine (DEFAULT^BPSSCRU4) to attempt to determine a default item. That subroutine will be invoked by two existing subroutines (SELLINE^BPSSCRU4 and ASKLINES^BPSSCRU4) prior to prompting the user to enter an item. If the DEFAULT subroutine returns a value, then that value will be presented to the user as the default.

The changes described below will handle all 23 of the actions indicated in the story.

| Subroutine Name | **SELLINE^BPSSCRU4** | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Enhancement Category | New | | Modify | Delete | | | No Change | | |
| Story | US187 (Rally ID) | | | | | | | | |
| Related Options | ECME User Screen | | | | | | | | |
| Related Routines | Subroutine is Called By | | | | | Subroutine Calls | | | |
| ASKLINE^BPSELG, ASKLINE^BPSRES, ASKLINE^BPSSCRU4 | | | | | $$DEFAULT^BPSSCRU4, $$PROMPT^BPSSCRU4 | | | |
| Data Dictionary (DD) References | None | | | | | | | | |
| Related Protocols | None | | | | | | | | |
| Related Integration Control Registrations (ICRs) | None | | | | | | | | |
| Data Passing | Input | Output Reference | | | Both | | | Global Reference | Local |
| Input Attribute Name and Definition | Name: BPROMPT  Definition: Prompt to display to user.  New  Modify  Delete  No Change  Name: BPTYPE  Definition: P, C or PC, indicating that the prompt will accept a patient, a claim or either.  New  Modify  Delete  No Change  Name: BPTMP1  Definition: Temporary ListMan global containing list of patients and claims.  New  Modify  Delete  No Change  Name: BPDFLT  Definition: Default value to present to user.  New  Modify  Delete  No Change | | | | | | | | |
| Output Attribute Name and Definition | Name: $$SELLINE  Definition: String of values (see comments in code below).  New  Modify  Delete  No Change | | | | | | | | |
| Current Logic | | | | | | | | | |
| ;prompts the user for line# for various menu option of the User Screen  ;input:  ; BPROMPT - prompt string  ; BPTYPE - expected user's selection on level  ; of P-patient or C-claim or PC - both  ; BPTMP1 - temporary global (VALMAR)  ; BPDFLT - default value for the prompt (optional)  ;output:  ; piece 1:  ; 1 - okay  ; <0 - errors  ; 0 - user wants to quit  ; piece 2: patient ien #2  ; piece 3: insurance ien #36  ; piece 4: ptr to #9002313.59  ; piece 5: 1st line for index(es) in LM "VALM" array  ; piece 6: patient's index  ; piece 7: claim's index  SELLINE(BPROMPT,BPTYPE,BPTMP1,BPDFLT) ;\*/  N BPX,BPLINE,BPPATIND,BPCLMIND  N BPDFN,BPSINSUR,BP59,BP1LN  S BPLINE=$$PROMPT(BPROMPT,$G(BPDFLT))  I BPLINE="^" Q 0  S BPPATIND=+$P(BPLINE,".")  I (BPLINE["-")!(BPLINE[",") Q -8 ;multiple line input in not allowed  I '$D(@BPTMP1@("LMIND",BPPATIND)) Q -1 ;the patient level doesn't exist  S BPCLMIND=+$P(BPLINE,".",2)  I BPTYPE="P",BPCLMIND>0 Q -2 ;P was requested but claim portion was provided  I BPTYPE="C",BPCLMIND=0 Q -3 ;C was requested but claim portion was not provided  I '$D(@BPTMP1@("LMIND",BPPATIND,BPCLMIND)) Q -4 ;the claim level doesn't exist  S BPDFN=$O(@BPTMP1@("LMIND",BPPATIND,BPCLMIND,0))  I +BPDFN=0 Q -5 ;error  S BPSINSUR=$O(@BPTMP1@("LMIND",BPPATIND,BPCLMIND,BPDFN,""))  I BPSINSUR="" Q -6 ;error  ;if fractional part was entered  I BPCLMIND>0 D I +BP59=0 Q -7 ;error  . S BP59=$O(@BPTMP1@("LMIND",BPPATIND,BPCLMIND,BPDFN,BPSINSUR,0))  I BPCLMIND=0 S BP59=0  S BP1LN=$O(@BPTMP1@("LMIND",BPPATIND,BPCLMIND,BPDFN,BPSINSUR,BP59,0))  I +BP1LN=0 Q -7 ;error  Q "1"\_U\_BPDFN\_U\_BPSINSUR\_U\_BP59\_U\_BP1LN\_U\_BPPATIND\_U\_BPCLMIND | | | | | | | | | |
| Modified Logic (Changes are highlighted) | | | | | | | | | |
| ;prompts the user for line# for various menu option of the User Screen  ;input:  ; BPROMPT - prompt string  ; BPTYPE - expected user's selection on level  ; of P-patient or C-claim or PC - both  ; BPTMP1 - temporary global (VALMAR)  ; BPDFLT - default value for the prompt (optional)  ;output:  ; piece 1:  ; 1 - okay  ; <0 - errors  ; 0 - user wants to quit  ; piece 2: patient ien #2  ; piece 3: insurance ien #36  ; piece 4: ptr to #9002313.59  ; piece 5: 1st line for index(es) in LM "VALM" array  ; piece 6: patient's index  ; piece 7: claim's index  SELLINE(BPROMPT,BPTYPE,BPTMP1,BPDFLT) ;\*/  N BPX,BPLINE,BPPATIND,BPCLMIND  N BPDFN,BPSINSUR,BP59,BP1LN  ;  ; Attempt to determine default if none passed in.  ;  I ‘$G(BPDFLT) S BPDFLT=$$DEFAULT(BPTYPE,BPTMP1)  ;  S BPLINE=$$PROMPT(BPROMPT,$G(BPDFLT))  I BPLINE="^" Q 0  S BPPATIND=+$P(BPLINE,".")  I (BPLINE["-")!(BPLINE[",") Q -8 ;multiple line input in not allowed  I '$D(@BPTMP1@("LMIND",BPPATIND)) Q -1 ;the patient level doesn't exist  S BPCLMIND=+$P(BPLINE,".",2)  I BPTYPE="P",BPCLMIND>0 Q -2 ;P was requested but claim portion was provided  I BPTYPE="C",BPCLMIND=0 Q -3 ;C was requested but claim portion was not provided  I '$D(@BPTMP1@("LMIND",BPPATIND,BPCLMIND)) Q -4 ;the claim level doesn't exist  S BPDFN=$O(@BPTMP1@("LMIND",BPPATIND,BPCLMIND,0))  I +BPDFN=0 Q -5 ;error  S BPSINSUR=$O(@BPTMP1@("LMIND",BPPATIND,BPCLMIND,BPDFN,""))  I BPSINSUR="" Q -6 ;error  ;if fractional part was entered  I BPCLMIND>0 D I +BP59=0 Q -7 ;error  . S BP59=$O(@BPTMP1@("LMIND",BPPATIND,BPCLMIND,BPDFN,BPSINSUR,0))  I BPCLMIND=0 S BP59=0  S BP1LN=$O(@BPTMP1@("LMIND",BPPATIND,BPCLMIND,BPDFN,BPSINSUR,BP59,0))  I +BP1LN=0 Q -7 ;error  Q "1"\_U\_BPDFN\_U\_BPSINSUR\_U\_BP59\_U\_BP1LN\_U\_BPPATIND\_U\_BPCLMIND | | | | | | | | | |

| Subroutine Name | **ASKLINES^BPSSCRU4** | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Enhancement Category | New | | Modify | Delete | | | No Change | | |
| Story | US187 (Rally ID) | | | | | | | | |
| Related Options | ECME User Screen | | | | | | | | |
| Related Routines | Subroutine is Called By | | | | | Subroutine Calls | | | |
| EUSCREOP^BPSREOP1, CLO^BPSSCRCL, RES^BPSSCRRS, RESNRV^BPSSCRRS, REV^BPSSCRRV, SELCLMS^BPSWRKLS | | | | | $$DEFAULT^BPSSCRU4, $$MKINDEXS^BPSSCRU4, $$PROMPT^BPSSCRU4 | | | |
| Data Dictionary (DD) References | None | | | | | | | | |
| Related Protocols | None | | | | | | | | |
| Related Integration Control Registrations (ICRs) | None | | | | | | | | |
| Data Passing | Input | Output Reference | | | Both | | | Global Reference | Local |
| Input Attribute Name and Definition | Name: BPROMPT  Definition: Prompt to display to user.  New  Modify  Delete  No Change  Name: BPTYPE  Definition: P, C or PC, indicating that the prompt will accept a patient, a claim or either.  New  Modify  Delete  No Change  Name: BPARRLN2  Definition: Passed by reference; used to return results.  New  Modify  Delete  No Change  Name: BPTMP  Definition: Temporary ListMan global containing list of patients and claims.  New  Modify  Delete  No Change | | | | | | | | |
| Output Attribute Name and Definition | Name: $$ASKLINES  Definition: 1 if successful, -1 if invalid entry, ^ if user quit.  New  Modify  Delete  No Change  Name: BPARRLN2  Definition: Array of lines selected  New  Modify  Delete  No Change | | | | | | | | |
| Current Logic | | | | | | | | | |
| ;BPTMP = VALMAR  ;input:  ; BPROMPT - prompt text  ; BPTYPE - expected user's selection on level  ; of P-patient or C-claim or PC - both  ; BPTMP - temporary global (like VALMAR)  ; BPARRLN2 - to return results  ;output :  ; 1 if okay  ; -1 -invalid format  ; ^ - quit  ; BPARRLN2 - Array(B59)="line# in VALM"^"PatientIndex.ClaimIndex"  ;example:  ; BPARR(30045.00001)=134^2.34  ASKLINES(BPROMPT,BPTYPE,BPARRLN2,BPTMP) ;  N BPQ,BPXLN,BPN,BPLN,BPZ  N BPL,BPCLM  N BPARRLN1,BPX1  S BPSPROM="Select item(s)"  S BPLN=$$PROMPT(BPSPROM,"")  I BPLN="^" Q "^"  S BPLN=$P(BPLN,U)  S BPQ=0  F BPN=1:1 S BPX1=$P(BPLN,",",BPN) Q:$L(BPX1)=0 D Q:BPQ'=0  . S BPZ=$$MKINDEXS(BPX1,BPTMP,.BPARRLN1)  . I BPZ<1 S BPQ=-1  . I (BPZ=-1)!(BPZ=-2) W !,"Invalid format.",!  . I (BPZ=-3) W !,"Not a valid selection.",!  Q:BPQ=-1 -1  ;  N BPPAT,BPCLM  S BPPAT=0 F S BPPAT=$O(BPARRLN1(BPPAT)) Q:BPPAT="" D  . S BPCLM=0 F S BPCLM=$O(BPARRLN1(BPPAT,BPCLM)) Q:BPCLM="" D  . . S BP1=$G(BPARRLN1(BPPAT,BPCLM))  . . Q:$L(BP1)=0  . . S BPARRLN2(+$P(BP1,U,4))=+$P(BP1,U,5)\_U\_BPPAT\_"."\_BPCLM  Q 1 | | | | | | | | | |
| Modified Logic (Changes are highlighted) | | | | | | | | | |
| ;BPTMP = VALMAR  ;input:  ; BPROMPT - prompt text  ; BPTYPE - expected user's selection on level  ; of P-patient or C-claim or PC - both  ; BPTMP - temporary global (like VALMAR)  ; BPARRLN2 - to return results  ;output :  ; 1 if okay  ; -1 -invalid format  ; ^ - quit  ; BPARRLN2 - Array(B59)="line# in VALM"^"PatientIndex.ClaimIndex"  ;example:  ; BPARR(30045.00001)=134^2.34  ASKLINES(BPROMPT,BPTYPE,BPARRLN2,BPTMP) ;  N BPQ,BPXLN,BPN,BPLN,BPZ  N BPL,BPCLM,BPDFLT  N BPARRLN1,BPX1  S BPSPROM="Select item(s)"  ;  ; Attempt to determine default.  ;  S BPDFLT=$$DEFAULT(BPTYPE,BPTMP)  ;  S BPLN=$$PROMPT(BPSPROM,BPDFLT)  I BPLN="^" Q "^"  S BPLN=$P(BPLN,U)  S BPQ=0  F BPN=1:1 S BPX1=$P(BPLN,",",BPN) Q:$L(BPX1)=0 D Q:BPQ'=0  . S BPZ=$$MKINDEXS(BPX1,BPTMP,.BPARRLN1)  . I BPZ<1 S BPQ=-1  . I (BPZ=-1)!(BPZ=-2) W !,"Invalid format.",!  . I (BPZ=-3) W !,"Not a valid selection.",!  Q:BPQ=-1 -1  ;  N BPPAT,BPCLM  S BPPAT=0 F S BPPAT=$O(BPARRLN1(BPPAT)) Q:BPPAT="" D  . S BPCLM=0 F S BPCLM=$O(BPARRLN1(BPPAT,BPCLM)) Q:BPCLM="" D  . . S BP1=$G(BPARRLN1(BPPAT,BPCLM))  . . Q:$L(BP1)=0  . . S BPARRLN2(+$P(BP1,U,4))=+$P(BP1,U,5)\_U\_BPPAT\_"."\_BPCLM  Q 1 | | | | | | | | | |

| Subroutine Name | **DEFAULT^BPSSCRU4** | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Enhancement Category | New | | Modify | Delete | | | No Change | | |
| Story | US187 (Rally ID) | | | | | | | | |
| Related Options | ECME User Screen | | | | | | | | |
| Related Routines | Subroutine is Called By | | | | | Subroutine Calls | | | |
| SELLINE^BPSSCRU4, ASKLINES^BPSSCRU4 | | | | | None | | | |
| Data Dictionary (DD) References | None | | | | | | | | |
| Related Protocols | None | | | | | | | | |
| Related Integration Control Registrations (ICRs) | None | | | | | | | | |
| Data Passing | Input | Output Reference | | | Both | | | Global Reference | Local |
| Input Attribute Name and Definition | Name: BPTYPE  Definition: P, C or PC, indicating that the prompt will accept a patient, a claim or either.  New  Modify  Delete  No Change  Name: BPLIST  Definition: Temporary ListMan global containing list of patients and claims.  New  Modify  Delete  No Change | | | | | | | | |
| Output Attribute Name and Definition | Name: $$DEFAULT  Definition: Patient number, claim number or <blank>.  New  Modify  Delete  No Change | | | | | | | | |
| Current Logic | | | | | | | | | |
| N/A | | | | | | | | | |
| Modified Logic (Changes are highlighted) | | | | | | | | | |
| ;  ; DEFAULT will return a value to be used as the default at the  ; Select Item prompt if there is only one item on the list. If the  ; user must enter a patient-level item (BPTYPE of “P”), then the  ; patient number will be returned if only one. Otherwise, the claim  ; number will be returned if only one patient and one claim.  ; Input: BPTYPE – P if user should enter a Patient.  ; C if user should enter a Claim.  ; PC if user may enter either.  ; BPLIST – temporary global (VALMAR).  ; Output: $$DEFAULT – Either a patient number, or a claim number,  ; or <blank> if neither could be defaulted.  DEFAULT(BPTYPE,BPLIST) ; Determine default item number.  NBPSCLAIM,BPSPATIENT  S BPSPATIENT=$O(@BPLIST@(“LMIND”,0))  I $O(@BPLIST@(“LMIND”,BPSPATIENT))’=“” Q “” ; If not one patient, Quit “”.  I BPTYPE=“P” Q BPSPATIENT ; If BPTYPE is P(atient), then Quit with the patient.  S BPSCLAIM=$O(@BPLIST@(“LMIND”,BPSPATIENT,0))  I $O(@BPLIST@(“LMIND”,BPSPATIENT,BPSCLAIM))’=“” Q “” ; If not one claim, Quit “”.  Q BPSPATIENT\_“.”\_BPSCLAIM  ; | | | | | | | | | |