

Integrating EWD with VISTA

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A biased history of User Interfaces to VISTA

- Traditional Roll and Scroll (CHUI) to execute routines.
- Any good Roll and Scroll will need a menu system.

Menus

```
sakura@icarus: ~  
File Edit View Search Terminal Help  
Select Core Applications Option: ??  
  
PSM   Pharmacy Data Management ... [PSS MGR]  
PCE   PCE Coordinator Menu ... [PX PCE COORDINATOR MENU]  
HS    Health Summary Coordinator's Menu ... [GMTS COORDINATOR]  
VFM   VOE Fileman ... [DIZ FILEMAN]  
CAC   CPRS Configuration (Clin Coord) ... [OR PARAM COORDINATOR MENU]  
CRM   Reminder Managers Menu ... [PXRМ MANAGERS MENU]  
IRM   CPRS Configuration (IRM) ... [OR PARAM IRM MENU]  
      **> Locked with XUPROG  
LAB   Laboratory DHCP Menu ... [LRMENU]  
      **> Locked with LRLAB  
OP    Outpatient Pharmacy Manager ... [PSO MANAGER]  
TIUI  TIU Maintenance Menu ... [TIU IRM MAINTENANCE MENU]  
TIUM  Text Integration Utilities (MIS Manager) ... [TIU MAIN MENU MGR]  
      EHR Registration Menu ... [DGZ REGISTRATION MENU]  
      Medication Administration Menu Pharmacy ... [PSB PHARMACY]  
  
You can also select a secondary option:  
  
      CPRS Reminder Configuration ... [PXRМ CPRS CONFIGURATION]  
  
Press 'RETURN' to continue, '^' to stop: 
```

And then...

Vista CPRS in use by: Clerk, One (10.10.10.101)

File Edit View Tools Help

ZZ PATIENT, TEST TWO Visit Not Selected Primary Care Team Ugned Flag VistaWeb Postings
Dec 25, 1957 (53) Current Provider Not Selected Remote Data A

Active Problems	Allergies / Adverse Reactions	Postings
Family History Of Diabetes Mellitus (ICD-9) Diabetes Mellitus Without Mention Of Complications Left Ventricular Hypertrophy	Peanut Oil	Allergies

Active Medications	Clinical Reminders	Due Date
No Active Medications Found	Retrieving in background...	

Recent Lab Results	Vitals	Appointments/Visits/Admissions
Retrieving in background...	T 99 F Jul 19, 20 P 32 Jul 19, 20 R 23 Jul 19, 20 BP 220/89 Jul 19, 20 HT 72 in Jul 19, 20 WT 200 lb Jul 19, 20	No data found

Cover Sheet Problems Meds Orders Notes Consults D/C Summ Labs Reports

Why the menu system?

- The menu system provides the foundation of VISTA security
- The menu system is very extensible.
- Power users can develop new applications using Fileman RAD (from... the menu system)
- A new application can be easily developed and dropped into the menu system.

Why again?

- The crux of the Problem
 - Power Users versus Programmers versus Sys Admins
 - Accountability
- EWD has the potential to bring back DHCP

What's needed?

- We need the following in order for this to happen
 - Has to look pretty.
 - Foundational Elements of VISTA
 - Sign-on
 - Division Selection/Change
 - Menu System

What's needed?

- Fileman Building Blocks
 - DIR
 - DIC
 - DIQ
 - DIE
- Automatic conversion of existing applications
 - Screenman
 - List Manage
- A good IDE for end users to build their own applications.
 - Text editor won't cut it

The devil is in the details

- Developing infrastructure tools for VISTA is hard
 - They need extensive testing
 - They need to be used a lot by end users to be called tested
- A good example of a failure in development
 - Support for mixed case verify codes

Specific Issues

- Session Maintenance

- Inject code like this in every page

- r(sessid) ; Restore Symbol Table
 - d mergeArrayFromSession^%zewdAPI(.DUZ,"DUZ",sessid)
 - d mergeArrayFromSession^%zewdAPI(.IO,"IO",sessid)
 - s U=\$\$getSessionValue^%zewdAPI("U",sessid)
 - quit
 - ;
 - s(sessid) ; Save to Symbol Table
 - d mergeArrayToSession^%zewdAPI(.DUZ,"DUZ",sessid)
 - d mergeArrayToSession^%zewdAPI(.IO,"IO",sessid)
 - d setSessionValue^%zewdAPI("U","^",sessid)
 - quit

Session Maintenance

- Can wrap the above in a custom tag
- Or can use `ewdTemplate.ewd`
- Need to design mechanism on incrementing decrementing variables saved in the session.
- Very commonly VISTA keeps incrementing variables to use
 - Can do `S X="%"` `F S X=$O(@X)` `Q:X=""` to save all the variables in ST to session.
- But is the session the new ST? The session does not scope variables.

Session Maintenance

- In order to prevent variables from accumulating
 - Use `tmp.sessionname` – but if the form doesn't submit, you lose your session values
 - Namespace the variables and delete them en masse

Configuring IO for EWD

- NULL ; Open Null Device
- s %ZIS="0H",IOP="NULL" d ^%ZIS
- i POP s \$ec=","U1," ; this crashes everything...
intended...
- q
-

Tracking EWD Errors

- Right now, EWD Errors (even VISTA related) are in `^%zewdError`
- It would be better to use the far more robust VISTA Error Handler (robust, but it still can't handle transactions—FYI: Transactions were introduced in the '95 standard)

Menu System Support for EWD Applications

- The idea is that each separate “menu item” is going to be a separate EWD application.
- To switch between applications use:
 - `d setRedirect^%zewdAPI`
 - BUT: `ewdLogout.ewd` doesn't return you to the starting application.

RPC Wrapper

- A lot of existing and new functionality work over the RPC system

EWD Custom Tags to work with Fileman

- `<fm:edit dd="200" fields="200.05;200.09;31.2;31.3" iens="#DUZ" />`
 - `EDIT(nodeOID,attrValues,docOID,technology)` ; Fileman Field Edit tag
 - ; Get Attributes supplied to us: dd, fields, iens
 - ;
 - N attrs
 - `D getAttributeValues^%zewdCustomTags(nodeOID,.attrs)`
 - N DD S DD=\$g(attrs("dd")) ; Data Dictionary
 - N FIELDS S FIELDS=\$g(attrs("fields")) ; Fields to Edit
 - N IENS S IENS=\$g(attrs("iens")) ; IENs to Edit
 - ;
 - ; Does our Form Tag Exist?
 - N fOID S fOID=\$\$getElementById^%zewdDOM("fmEdit",docOID)

Various other issues

- EWD SAC compliance
 - Is it important? EWD meets the spirit of SAC compliance, but not the letter
 - EWD Routines on Cache are closed source – may as well be Intersystems routines—Do we dictate what Intersystems can or cannot do?
 - EWD Source are our own routines + ewd/css/js
- Transmission of EWD applications via KIDS
 - Should be easy
 - EWD applications are mostly files on the fs with our own routines

Farewell to Monolithic Applications