Memorandum

To:	Deepika Nagaraj	Mike Lambeth		
cc:	Michael Lacasse	Dave Schmitt	Neil Horner	Tony Kerr
	Ralph Groves	Michael Reynolds	Matt Morgan	
From:	John Effland			
Date:	2008-06-17			

Revs:

1.0	2008-04-23	jee	Initial
2.0	2008-04-24	jee	Added input for initial screen, device selection, changed status screen, and removed `Add Event` screen
3.1	2008-06-10	jee	Updated to align with current Preamp Screen design
3.2	2008-06-16	jee	Updated based on this morning's feedback
3.3	2008-06-17	jee	Based on this morning's feedback, added Docs & Notes and Configuration # input screens

Subject: Internet Browser Screens to Manage Band 6 Preamp Construction

1. Introduction

This memo provides updated screens for the browser-based design to manage Band 6 preamps.

The memo is also written in response to Deepika's latest e-mail of the proposed design, dated Monday, June 09, 2008 2:15 PM, which discussed her latest Internet browser screen, Figure 1. Documents describing previous design versions are available from hyperlinks in the above Rev table.

The latest design incorporates device "configuration number", which is a number that defines the physical state of the part and allows documenting all configuration phases during the lifetime of the part. Configuration numbers change when a significant change is made to a part, which for preamps includes:

1. Changing any of the devices,
2. Rebonding any wires, and/or
3. Replacing or lapping device lids.

Configuration numbers provide the means to document configurations of both parts and the parent assemblies that use the part. For example, the configuration number of the preamp will change when the preamp is repaired. If that repaired preamp is used in a mixer-preamp, then the configuration of that assembly must change, since a child part has changed. If that changed mixer-preamp is used in a cartridge, then that cartridge configuration has changed so the configuration of the entire cartridge changes, too.

1.1 Preamp Status Screen

The preamp status screen of Figure 2 includes the following features:

1. A preamp of interest is chosen by selecting the serial number from a select box.
2. Attributes of the selected preamp are modified using one of three methods:
    a. Simply adding documents and notes to the existing preamp configuration.
    b. Modifying the preamp such that a new configuration number is required, and
    c. Adding an entirely new preamp.
3. The mixer to which this preamp attaches is shown using standard nomenclature:

    Part of Mixer-preamp <u>155</u> : <u>235</u> /<u>133</u> :17

    where the mating mixer screen is obtained from the 155 hyperlink, and the matched preamp screen from the 133 hyperlink. If no such pairing exists, then the hyperlink is not present.
4. Selecting the relevant "configuration" by clicking on the hyperlink in the events table. New configurations typically change data in the top half of the screen.
5. Warm and cold measurement data are available by selecting the appropriate hyperlinks. Old measurement data are available by selecting the appropriate hyperlink in the Events table located at the bottom of the status screen.
6. The HFET wafer and chip parameters are available from the table at the bottom of the screen.
7. The Notes table at the bottom of the screen contains notes about the preamp and any configuration changes.

No changes can be made to any entries from the status screen of Figure 2. One of the buttons at the top of the screen must be pressed to add or change information, as described below.

1.2 Preamp Modify Screen

Additions and changes to preamp measurement data are entered using this screen, shown in Figure 3. Note that configuration changes are recorded as shown in Figure 4. The all-important Update Record button is located at the top of the screen.

Figure 3 is used to record the following events:

1. Preamp location changes
2. Preamp status changes (e.g. "Ready for mixer", "Repair Needed," "Waiting for Noise Tests," *etc*.)
3. Matching with another preamp
4. Recording the location of another warm or cold measurement data file. The URL for the previous data file is recorded in the Misc link record.

1.3 New Configuration Number Screen

Figure 4 is displayed when a preamp *configuration* changes, defined when one of the following events occurs:

1. An HFET is replaced
2. A connector is repaired
3. A lid is lapped
4. A bondwire is replaced

Simple additions and changes to preamp data are recorded in Figure 3.

1.4 New Preamp Screen

This screen is basically identical to Figure 6, except that the user is allowed to enter new serial numbers.

1.5 Common Screen Elements

The `Bugs/Enhancements` button loads the software bug tracking web page, which will soon be upgraded to allow requests to enhance software in addition to tracking bugs. A `Help` button loads an HTML help file.

Table 1 and Figure 5 describe the common drop-down box located at the top of each page.

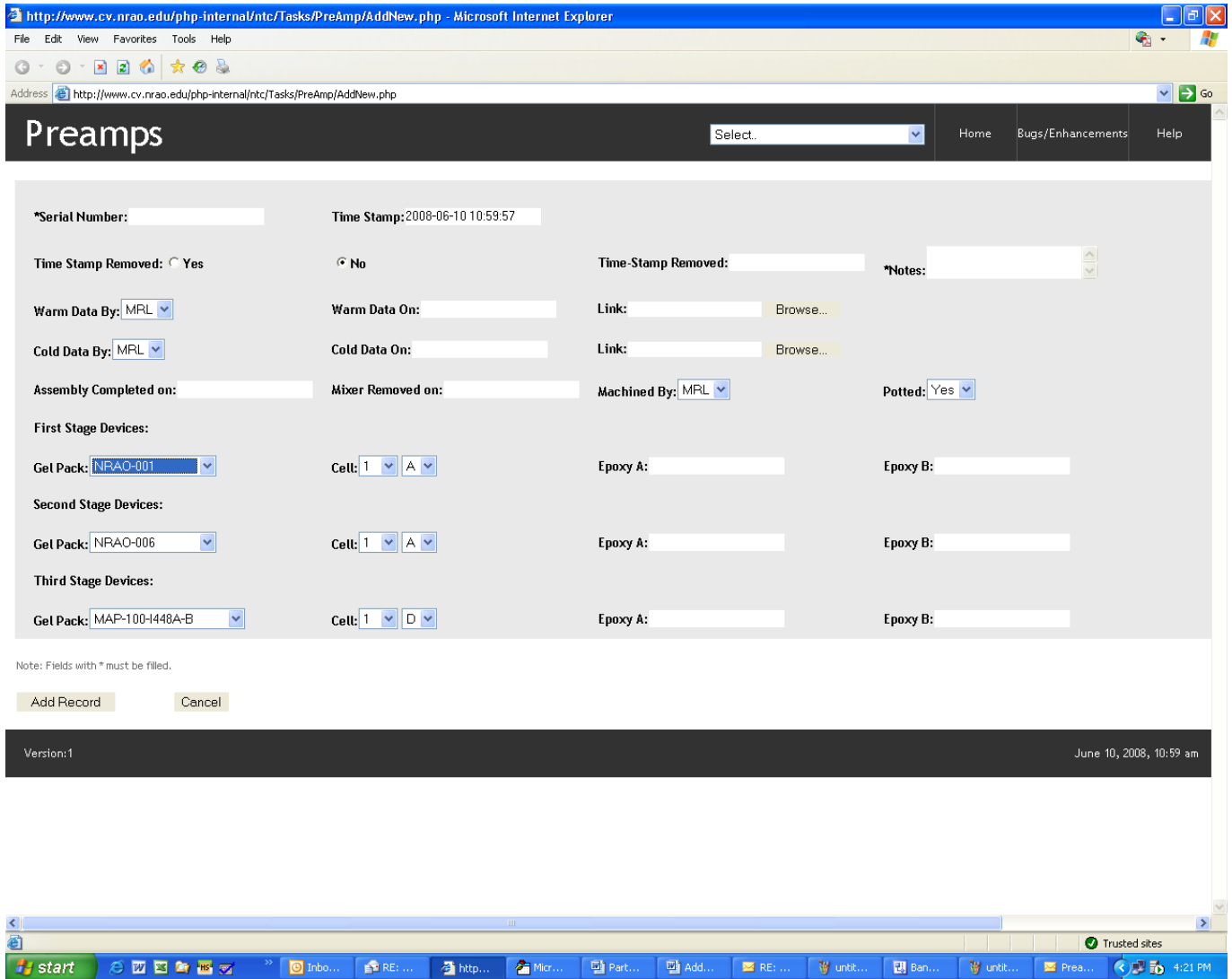**Figure 1: Proposed Update Screen from Nagaraj, dated Monday, June 09, 2008 2:15 PM**

Figure 2: Proposed Preamp Status Screen

| **Preamps** | Add Docs & Notes | New Preamp | Select.. ∨ | Home | Bugs/Enhancements | Help |

| Serial # 235 ▼ | Part of Mixer-preamp 155 : 235 /133 :17
Configuration #: 2242   New Config | Location: Desiccator on 2008-04-24 09:45
Status: Ready for Cart on 2008-04-24 09:45 |

Warm Data measured: 2008-04-24 09:45 by: ML   Cold Data measured: 2008-04-24 09:45 by: ML

Stage	Gel-Pack	Cell	Epoxy A	Epoxy B
1st	NRAO-001	A10	PB012345	PB135673
2nd	NRAO-006	D4	PB112345	PB112345
3rd	MAP-100-2006-09-A	J2	PB112345	PB112344

| **Events** |

Date[1]	Location	Status	Who	Config #	Data	Notes
2008-06-11	Desiccator	Ready for CTS	ML	2242		Reinstalled in mixer block 155.
2008-06-11	ATS	Under test	ML	2242	⊞	Cold tested
2008-06-11	ATS	Under test	ML	2242	⊞	Warm tested
2008-06-11	Desiccator	Awaiting test	ML	2242		1st stage replaced
2008-06-11	Desiccator	Needs repair	ML	2234		Date Removed Entered
2008-06-11	Desiccator	Needs repair	ML	2234		Ralph reports high noise temps, status changed to "Needs Repair"
2008-06-11	Desiccator	Ready for MTS	ML	2234		Preamp installed in mixer block 155, ready for MTS testing
2008-06-11	Desiccator	Preamp Matched	ML	2234		Preamp matched with 133
2008-06-11	ATS	Under test	ML	2234	⊞	Cold tested
2008-06-11	ATS	Awaiting test	ML	2234		This preamp was measured cold today but the ATS has temperature problems

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[1] Events are ordered chronologically with most recent at top.

2008-06-11	Mxr Assm Lab	Awaiting test	ML	[2234](#)	⊞	Warm tested
2008-06-11	Mxr Assm Lab	Awaiting test	ML	[2234](#)		Active devices installed
2008-06-11	Mxr Assm Lab	Awaiting chips	RG	[2234](#)		Blocks received from ACC - passive components inserted
2008-06-11	ACC	At ACC	RG	[2234](#)		Blocks returned to ACC
2008-06-11	Mxr Assm Lab	At ACC	MR	[2234](#)		Screw holes cleaned out
2008-06-11	Mxr Assm Lab	Needs repair	ML	[2234](#)		ACC returned block, can't fit screws in lids
2008-06-11	ACC	At ACC	RG	[2234](#)		Preamps shipped to ACC
2008-06-11	Mxr Assm Lab	Block Fab	RG	[2234](#)		Blocks given to Gerry today to be plated
2008-06-11	Mxr Assm Lab	Block Fab	RG	[2234](#)		Blocks cleaned for plating
2008-06-11	Mxr Assm Lab	Block Fab	RG	[2234](#)		Blocks received from shop.

Figure 3: Add Documents and Notes Screen

Modify Preamps	Update Record	Select.. ⌄ Home Bugs/Enhancements Help
Serial # 235	Part of Mixer-preamp 155 : 235 /133 :17	Configuration #: 2242

Your name: ML ▼

Change location to: ACC ▼

Change status to: Ready for Cart ▼

Match with preamp: Enter serial # ▼

Warm data file: [   ] Browse...

Cold data file: [   ] Browse...

Entry on: 2008-06-16 14:40

Notes:
```
Type notes here
```

Miscellaneous data file: [   ] Browse...

Figure 4: New Configuration Number Screen

New Config for Preamps	Make New Config	Select.. Home Bugs/Enhancements Help
Serial # 235	Configuration #: 2242	Part of Mixer-preamp 155 : 235 / 133 : 17

Your name: ML

Change location to: ACC

Change status to: Ready for Cart

Match with preamp: Enter serial #

Warm data file: [ ] Browse...

Cold data file: [ ] Browse...

Entry on: 2008-06-16 14:40

Notes:
```
Type notes here
```

Miscellaneous data file: [ ] Browse...

Add/Change Devices*:

Stage	Gel-Pack	Cell		Epoxy A	Epoxy B
1st	NRAO-001	1	1A		
2nd	NRAO-001	1	1A		
3rd	NRAO-001	1	1A		

Table 1: Items in `View All` Drop-Down Screen	
Item Text	**Action when selected…links to**
View All	list all preamps in database
View New	list all preamps with no entries
----------------	divider
Account Nums	Band 6 account number web page
Bugs	Software bug tracking web page
Leave Schedule	NTC leave schedule
Phone Book	NRAO phone book
Plating Jobs	NTC Plating job listing
NTC Tasks	NTC task web page
NTC Conf Room Sched	Conference room schedule
NTC Penthouse Sched	Penthouse schedule
Tasks Database	Band 6 task database web page
Shop Jobs	NTC machine shop job listing

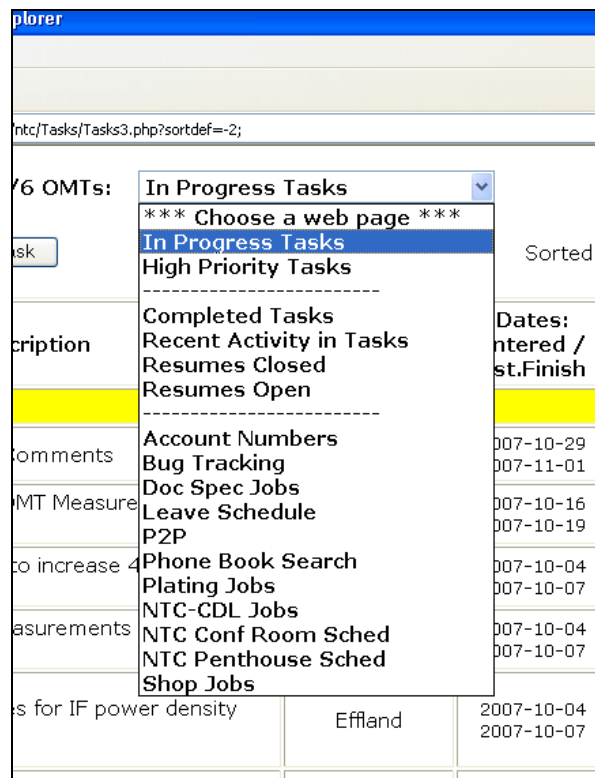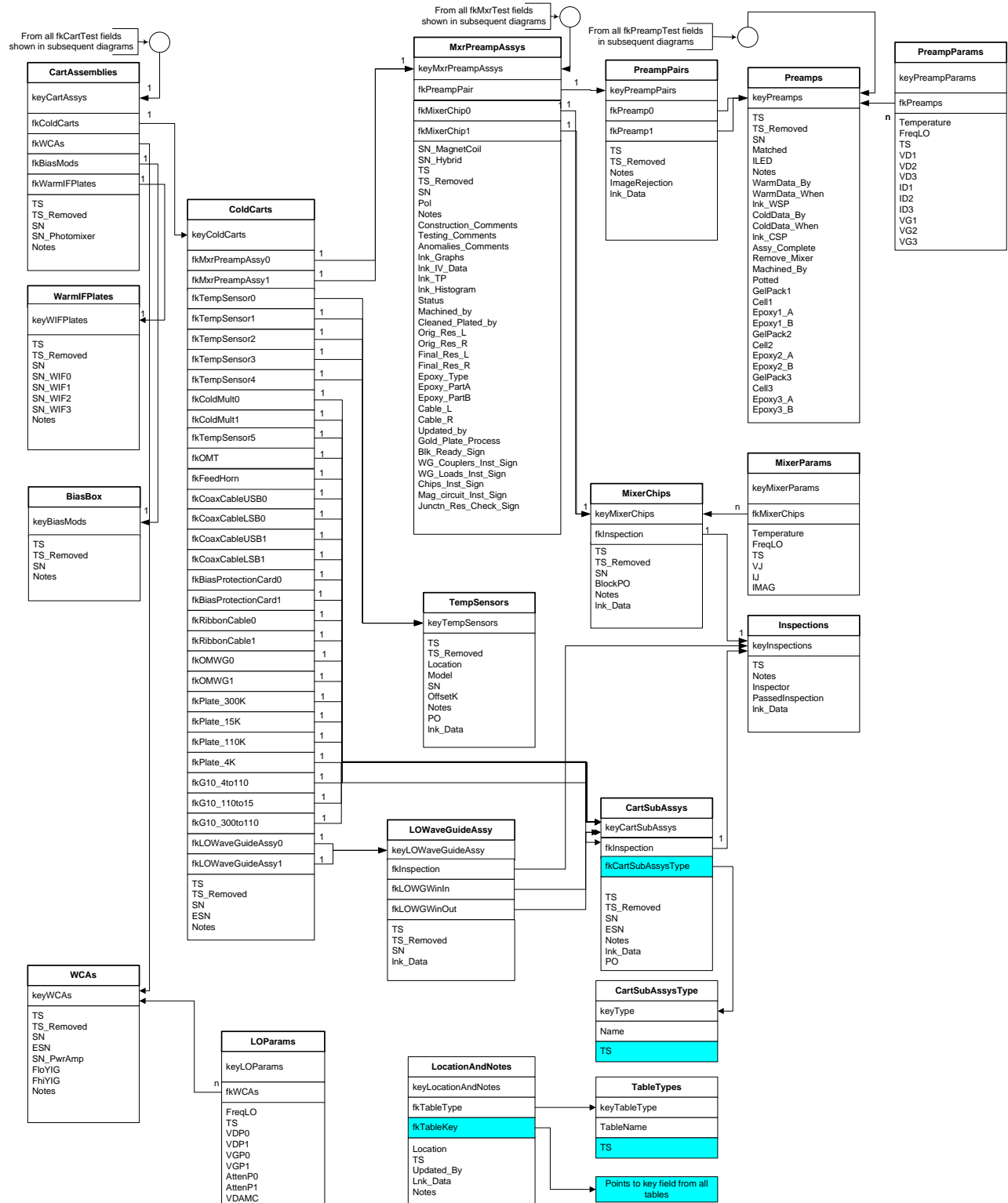**Figure 5: Sample drop-down box from Band 6 Tasks Software**

Figure 6: Database Schema Ver. 2.4