



Memorandum

To: Tony Marshall
cc: Gregg Morris S. -K. Pan
From: John Effland
Date: 2005-07-26
Revisions: 2005-07-26 jee Initial
Subject: Draft Requirements for Organizing “Rework” Jobs in Machine Shop

1. Introduction

A requirement exists for identifying, organizing, and tracking jobs returned to the machine shop for “rework”. This memo proposes input forms and reports for entering and displaying rework jobs using the web based shop jobs tracking program¹.

The idea is to enhance the existing shop jobs tracking software to include information on rework while minimizing software and database development effort. Rework jobs are almost identical to normal shop jobs, so database table modifications should be modest.

2. Adding a rework job to the system

To identify a job as rework and refer it back to the originally job, which is assumed to be complete, I propose that the user click on the “Show Completed Jobs” link on the jobs database page² (Figure 2), find and click on the original job number in the “Completed Shop Jobs” page (Figure 3), then press a button “Add Rework Job” as shown on the “Event Listing for Shop Job” screen in Figure 4.

The system will automatically tag the entry as rework and the customer has only to add comments about what’s wrong with the job using the “New Job” input screen shown in Figure 5.

3. Proposed report format

The shop job listing would identify rework jobs by showing two job numbers for them. The normal shop job number would be displayed first with the link to the original job displayed underneath, as shown in Figure 1. For example, Job 932 is a rework job and the original job was 900.

To list all rework jobs and relate them to the original shop jobs, a report format is proposed in Table 1. Initially, this report is a dynamically-created table on a web page, similar to the table available from the shop job software.

¹ “System to Track the Progress of Jobs in the CDL’s Machine Shop”, NRAO memo to Tony Marshall from John Effland, 2002-11-15, <http://www.cv.nrao.edu/~jeffland/ShopTrackingSystem.pdf>

² Shop jobs tracking program available at <http://www.cv.nrao.edu/~jeffland/nrao-only/Progs/Shop/Jobs1.php3>

Each rework job will have a job number with hyperlinks, just like the normal shop jobs, available for additional, time-tagged notes about the job.

In Table 1, each original job is listed in bold (this row could be colored in the web browser) and immediately underneath are rework jobs related to the original job and are identified with “R’s” following their job numbers. For example, job number 1390 is the original job for the shop, but this job required two cycles of rework (1399 and 1407) as shown in Table 1.

Because more than one rework cycle might be required for some shop jobs, the system will allow multiple rework jobs to be created, each relating to the previous job, which is either the original job or a rework job.

Figure 1: Job Listing modified to show rework jobs

Incomplete Shop Jobs				
Sorted by Date Entered (most recent first)		Show completed jobs	<input type="button" value="Add a Job"/>	
(Click on a job number to view or add details for that job)				
Job Number (Orig)	Description	Customer	Dates: Entered Required	Notes
932 900	2U Panel Mod. for Time Switch	Crady	2005-07-26 2005-08-05	Modify supplied panel per dwg.
931	Preamp board for the HF SBM antenna	Dan Boyd	2005-07-26 2005-08-23	Make three from .062 copper
843 623	Wiltron K connector adapter	Mitchell Wharam	2005-04-28 2005-05-26	100 pcs
830	Add slots to Band 3 AMC	Eric Bryerton	2005-04-11 2005-05-20	Add slot to 7 unplated Band 3 AMC Bodies. Added to shop database by Greg Morris
817	Modify Cryostat Clamps	Denis Urbain	2005-03-28 2005-04-25	Widen top and bottom clamp slots to 4.5mm on supplied clamps. 2 supplied. Added to shop database by Greg Morris.
769	Q-Band Amplifiers	Gerry Petencin	2005-01-19 2005-03-16	Make 15 amplifier assemblies per drawing. Added to shop database by Greg Morris.
Software Vers 1.2 (2003-08-21)				

Table 1: Rework Report Format

Rework Jobs				
Original Job #	Description	Customer	Dates Entered Completed	Notes
1390	Brackets	Effland	2003-12-26 2003-12-28	I really need these!
1399R	Holes missing	Effland	2003-12-29 2003-12-31	All 0.375" holes are missing!
1407R	Holes too small	Effland	2004-01-05 2004-01-06	All 0.375" holes are drilled too small!
1408	Front Panel	Effland	2004-02-28 2004-03-05	
1411R	Lettering misspelled	Effland	2004-03-05 2004-03-22	"Connector" spelled "Conneceter"!
1430R	Paint wrong color	Effland	2004-03-22 2004-04-05	Panel should be grey, not pink.



Figure 2: Shop Jobs Database Screen for Incomplete Jobs

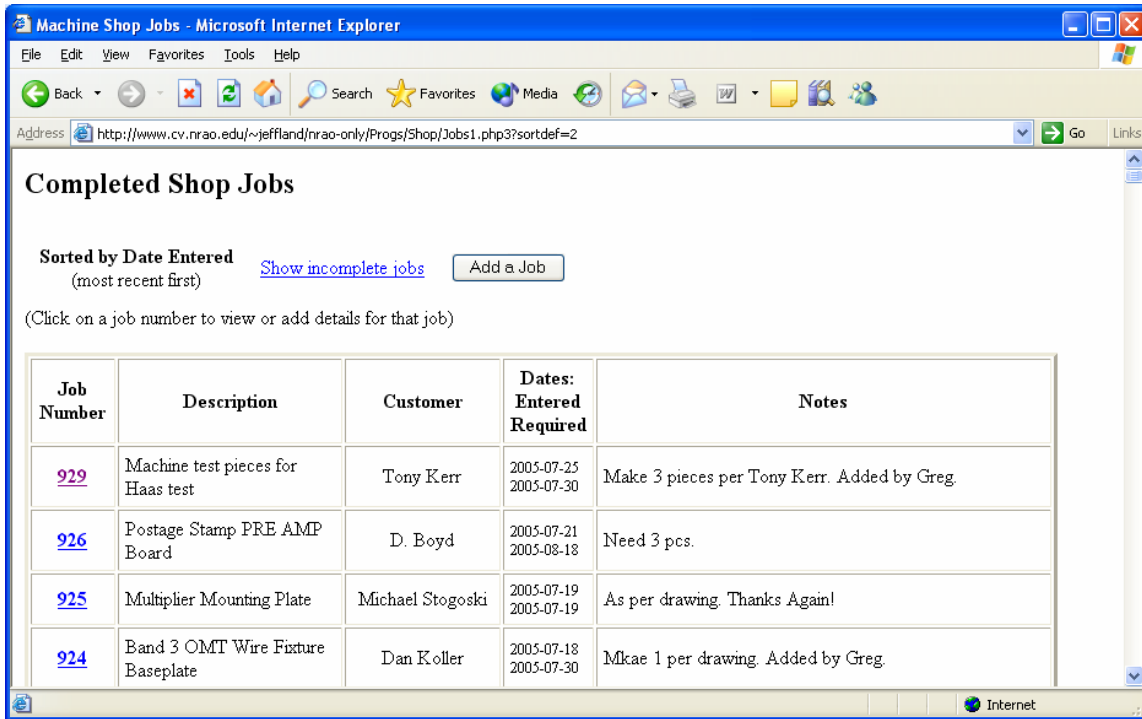


Figure 3: Shop Jobs Database Screen for completed Jobs

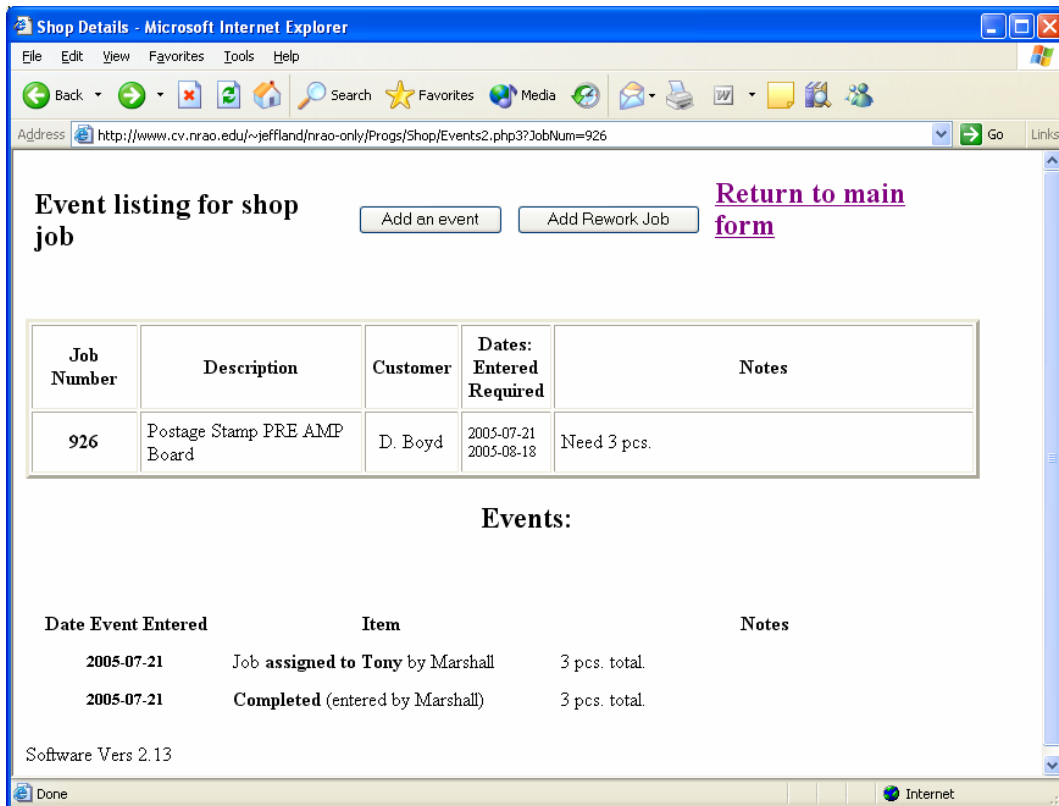


Figure 4: Shop Jobs Database screen where proposed "Add Rework" button will reside

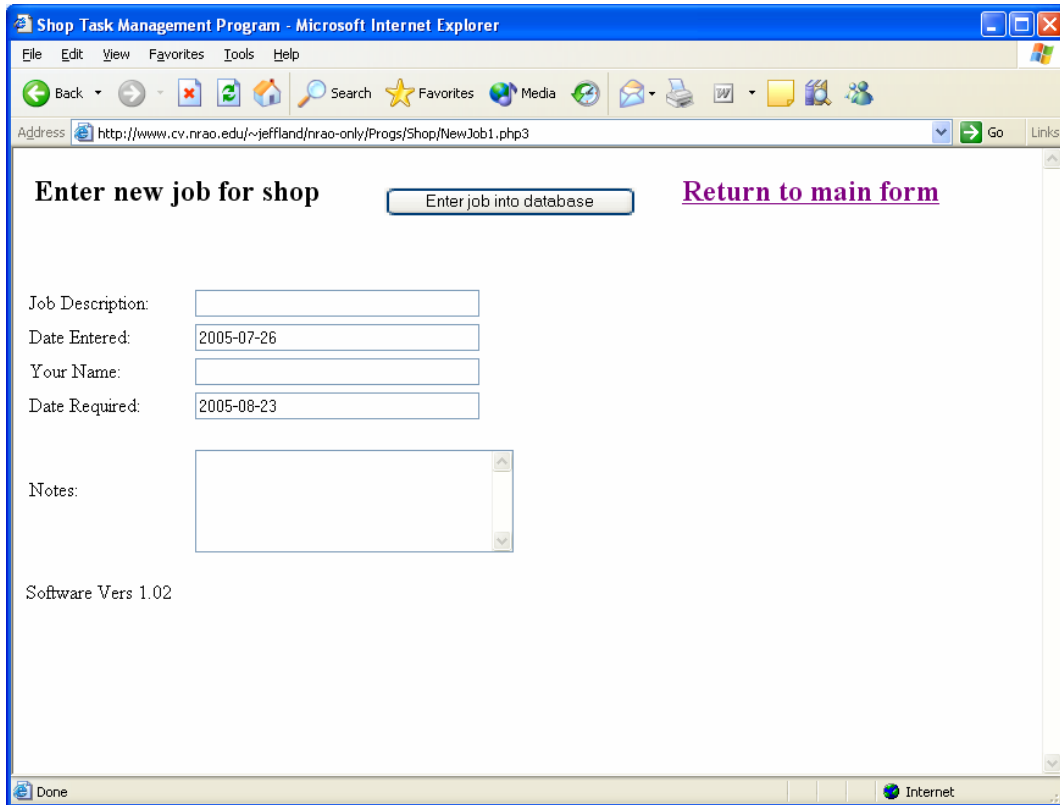


Figure 5: New Jobs input screen that will also be used for entry of rework jobs