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cc:	Gregg Morris	S. –K.	Pan				
From:	John Effland						
Date:	2005-07-26						
<b>Revisions:</b>	2005-07-26	jee	Initial				
Subject:	Draft Requirement	nts for O	rganizing "	Rework"	Jobs in M	Iachine Sho	ор

## 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 program<sup>1</sup>.

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 page<sup>2</sup> (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.

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

File: \\cvfiler.cv.nrao.edu\users\jeffland\Shop\Rework.doc

<sup>&</sup>lt;sup>1</sup> "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

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.

Ei (most r	d by Date ntered Show comp recent first) job number to view or add do		Add a Job	
Job Number (Orig)	Description	Customer	Dates: Entered Required	Notes
<u>932</u> 900	2U Panel Mod. for Time Switch	Crady	2005-07-26 2005-08-05	Modify supplied panel per dwg.
<u>931</u>	Preamp board for the HF SBM antenna	Dan Boyd	2005-07-26 2005-08-23	Make three from .062 copper
<u>843</u> 623	Wiltron K connector adapter	Mitchell Wharam	2005-04-28 2005-05-26	100 pcs
<u>830</u>	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
<u>817</u>	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.
<u>769</u>	Q-Band Amplifiers	Gerry Petencin	2005-01-19 2005-03-16	Make 15 amplifier assemblies per drawing. Added to shop database by Greg Morris.

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

## Table 1: Rework Report Format

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Sorted by I (most re	ete Shop Jobs Date Entered ecent first) Show complete		a Job		
ner on a jo	b number to view or add details f	tor that job)			
Job Number	Description	Customer	Dates: Entered Required	Notes	
Job			Entered	Notes Modify supplied panel per dwg.	
Job Number	Description 2U Panel Mod. for Time	Customer	Entered Required		
Job Number <u>932</u>	Description 2U Panel Mod. for Time Switch Preamp board for the HF	Customer Crady	Entered Required 2005-07-26 2005-08-05 2005-07-26	Modify supplied panel per dwg.	

Figure 2: Shop Jobs Database Screen for Incomplete Jobs

Machine S	hop Jobs - Microsoft Internet	Explorer			
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(most	y <b>Date Entered</b> recent first) Show inco		la Job		
Juck on a j	joo namoon to thew of had det	uns for unut job)			
Job Number	Description	Customer	Dates: Entered Required	Notes	
Job			Entered	<b>Notes</b> Make 3 pieces per Tony Kerr. Added by Greg.	
Job Number	<b>Description</b> Machine test pieces for	Customer	Entered Required		
Job Number <u>929</u>	Description Machine test pieces for Haas test Postage Stamp PRE AMP	Customer Tony Kerr	Entered Required 2005-07-25 2005-07-30 2005-07-21	Make 3 pieces per Tony Kerr. Added by Greg.	

Figure 3: Shop Jobs Database Screen for completed Jobs

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ess 😂 http:/	/www.cv.nrao.ed	u/~jeffland/nrao-only	//Progs/Shop/Eve	ents2.php3?Jobl	Num=926		💌 🄁 Go 🛛
Event li ob	sting for	shop	Add an evi	ent 🗸	Add Rework Job	<u>Return to main</u> <u>form</u>	
Job Number	Des	cription	Customer	Dates: Entered Required		Notes	
926	Postage Star Board	mp PRE AMP	D. Boyd	2005-07-21 2005-08-18	Need 3 pcs.		
				Event	s:		
Date Even	t Entered		Item			Notes	
2005-0	17- <b>21</b> ]	lob assigned to	Tony by Ma	rshall	3 pcs. total.		
2005-07-21     Completed (entered by Marshall)     3 pcs. total.							
ftware Vers	2.13						

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

🗿 Shop Task Managem	nent Program - Microsoft Internet Explorer		
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Enter new je	ob for shop Enterjob into database <u>Return to main fo</u>	orm	<
Job Description:			
Date Entered:	2005-07-26		
Your Name:			
Date Required:	2005-08-23		
Notes:			
Software Vers 1.02			
			~
ど Done		Internet	

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

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