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21M735 Tech Note #1 - Organization for Production

MIT Gilbert & Sullivan Players: Master Carpenters' Handbook

Recordkeeping for Set Construction

INTRODUCTION

This is a recommendation of best practice based partly on my experience as either MC or set crew on ten G&SP shows, and partly on ideas for improvements in the process. It is specific to the constraints and traditions of this student group.

I present the use of forms -- not to impose a layer of mindless bureaucracy on the the process, but to help the MC organize and share information more efficiently. The forms are mostly on paper, and while their contents can be uploaded to a digital document or spreadsheet to share online with other members of the production staff, I recommend keeping the master copy on paper so it is available in the Set Shop and at put-in, and is not susceptible to computer outages. The Inventory is the sole exception since its main purpose is to provide some continuity from one show to the next.

EXISTING PRACTICES

Since we usually have a very limited supply of skilled labor and small set budgets, our sets are designed to use as as much as possible (platforms, flats) from stock so there are fewer pieces to build. Often, old pieces will need some repairs, so this work has to be tracked as well. The storage space in our shop facility is already tightly packed, so it is best to avoid building anything new when possible simply to save storage space.

The Master Carpenter receives a set design showing overall shape and dimensions. He or she is responsible for creating the detailed drawings from which the set pieces can be built. Ideally, the MC works with the SD to use as many stock pieces as possible.

FORM 1: Inventory

The Inventory lives online in the "gsp" Athena locker so it will always be available to the current members of MITG&SP. Do not depend on being able to contact the next (or previous) MC to determine the state of the inventory; always update the online inventory with whatever pieces were created, changed, or destroyed for your show.

The inventory is found in: /mit/gsp/Production/SetShop/inventory.txt. It is a simple text file under RCS version control (so changes are easy to detect).

Currently, it only lists the large and generic pieces which are useful in every show, namely flats, platforms, and stairs. Special items like furniture, tree stumps, Princess Ida's bridge, etc are not listed -- although they should be. Platform legs (uniform lengths of 2x4) are also not listed since they are too fungible and tend to change with every show, get cut up for material, or eaten by the rats.

Be sure to give the Set Designer a current copy of the inventory before they start designing, so they can maximize the use of existing pieces.

Use the inventory yourself as a record of what should be in the storage area of the shop. It saves time if you can tell that there ought to be another 10'x18" flat to be found before pawing through all of the tightly-packed flats.

It bears repeating: Don't neglect to keep the inventory up to date, or it is worthless. Add any flats, platforms and stairs you build and subtract any that are demolished or changed.

Consider adding furniture and other "units" to the Inventory if you have time.

Also remember that props, set dressing (e.g. fake foliage by the bale) and a couple of pieces like King Paramount's Throne are stored in the G&SP office in W20, so you won't find them in a physical search of just the shop.

Form 2: Unit Worksheet

A "Unit" is (usually) any part of the set that is built and handled as one indivisible object, like a flat or a staircase. Keep units reasonably small (i.e. one flat each, not all the flats in the back wall) because you'll also use them to track the progress of work on the set.

Sometimes, it makes sense to group many objects together as one "unit", e.g. all the pieces of stair and platform facing. Since each one is just a rectangular piece of plywood or masonite, it would be a waste of time to track them individually.

Every unit has a unique identifier. It might be a simple serial number for all units, or a letter prefix identifying the type (like "F" for a flat, "S" for stairs, etc) and a number. The unit numbers of flats and platforms also identify them on the set designer's floor plan. Choose a scheme for you like and stick with it for your show.

Mark each unit with a piece of masking tape (so it can be removed, and will contrast with a Sharpie), that lists all of:

- Name of Show
- Year
- Unit Identifier

e.g. "Utopia '03 113"

The name of the show also serves to identify which group is using it. Since we share the shop and some pieces with MTG, it's important to mark every piece of the common stock you're using in a show, to "reserve" it. They will do the same, so know and respect the labels for the current MTG show.

Make up a separate worksheet for each unit, since one purpose of the sheet is to be able to hand it off to a set builder during a work session.

It isn't necessary to use a form. A sheet of graph paper with drawings and/or a cut list is often just as good. The Theater Arts form (by Mike Katz) is more complete and well-organized but it also tracks things we don't usually bother with at the unit level, such as labor time and cost. The mandatory elements of the unit worksheet are:

1. Unit Identifier
2. Show and Year

3. Date (in case you supercede the worksheet with a new version)
4. Drawing of unit, if applicable. Show measurements and how the pieces fit together. For a flat, show the framing so it is possible to derive (or check) a cut list from the drawing. Remember to show the dimensions and locations of any openings precisely.
5. Cut list (a.k.a. bill of materials). List all pieces of wood and their dimensions, so the builder can run down the list to prepare all the pieces.
6. Any unusual instructions, e.g. "Basin must be watertight because it goes under the operating fountain. Do not use papier-mache."

Form 3: Work Chart

Use the Work Chart to track the progress of building each unit. It has a row for every unit, and columns indicating tasks. When a task is begun, draw one diagonal slash through the box. When it is finished, draw another slash to make an "X". This gives an instant graphic view of what needs to be done. If you order the columns in the logical order of tasks (e.g. "cut" before "assemble") then it shows which units are most behind schedule and thus need urgent attention.

Here's a fragment of an example work chart:

				C		P		P	
			J		O		R		A
		C		O		V		I	
		U		I		E		M	
Unit		T		N		R		E	
		T		C		O		M	
		X		X		/		/	
Flat 101		X		X		/		/	
		X		/		/		/	
Flat 102		X		/		/		/	

Suggested columns:

- Drawing & Cut list -- i.e. prepare the unit worksheet.

- Cut -- Materials acquired and cut to size.
- Join -- Assembled into the unit
- Covered -- Muslin attached to soft flats, could mean dutching or papier-mache on 3D set pieces.
- Hardware -- any necessary hardware (hinges, etc) attached.
- Flameproofed -- flameproof any wood or fabric left unpainted.
- Backpainted -- paint the back of fabric on soft flats (and frame instead of flameproofing if desired.)
- Primer -- Apply primer or white paint to surfaces to be finished.
- Finish paint -- may need multiple columns or hash marks for complex multistage paintjobs like marble or brick.
- Put-in -- Attached to the set.
- Braced -- Backstage framing such as jacks applied to keep it in place.
- Comments -- Leave at least a couple of inches on each line for notes specific to the unit, special instructions, etc.

When recycling old stock pieces for a show, you can pre-check columns except where there is still work to do. For example, if an old platform needs a new or additional toggle in its frame, leave "Cut" empty until after the new wood is cut, then follow it through "Join", etc. If the platform was in good shape, you can cross all of the boxes up to "Primer".

Be sure to put the show name and year on the work chart (as on every other piece of paper) to save confusion if it gets mixed in with the papers from another show.