JWST: Proposal Planning System

User information

Bringing user information into the 21st century

A new approach to "documentation" for JWST

Abstract

We aim to provide JWST users with the information they need to plan, propose, and analyze observations. That information must be easy to find, particularly from the software tools provided for these tasks, and straightforward to assimilate.

To achieve these goals we are undertaking an all-new effort at STScI to make user information for JWST entirely web-based, using up-to-date tools. We are adopting the Every Page is Page One (EPPO) model, in which pages are self-contained and well-delineated.

This poster describes our strategy, plans, and progress.

The problem

- JWST has very capable but complex instruments that go well beyond current capabilities. People need to be able to find reliable information when and where they need it if they are to be effective users.
- JWST's expected lifetime of 5 to 10 years is fairly short and includes only a few intellectual cycles: _concept_ to _proposal_ to _observations_ to _publication_ to next _concept_.
- JWST will use a single stream of proposal processing, meaning that we expect submitted proposals to be ready to execute, without a "Phase 2" submission. (Some special cases, such as NIRSpec MSA observations, will still require a Phase 2.)
- The documentation methods used for HST have changed little over three decades. It is time to provide 21st century user information to a new generation of observers.

The top-down approach to information flow

A traditional structure

Traditional (pre-web) documentation uses a top-down approach. Think of an HST Instrument Handbook. It starts with a broad description and moves on to several discrete chapters with specification details and usage instructions. Each one of those documents largely stands alone, without formal ties or links to information beyond itself, partly because of administrative reasons. Even now HST documents are provided as page-equivalent PDFs and are self-contained. STScI produces many documents to support users of the telescope and its data. The information you need is written down somewhere, but is not necessarily easy to find. Just knowing where to find critical information is a skill in itself.

The web presence for an instrument is also top-down, but tends to naturally divide itself into smaller units than book chapters. The top-down approach is like an organizational chart; a pyramid that has the home page at the top with a modest number of child pages in a few layers beneath that.

A top-down architecture is capable of providing all the information a user may need, but the path to that information can be confusing and uncertain.

A bottoms-up approach

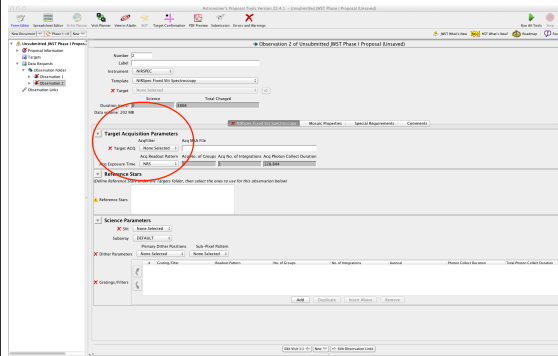### Start where the user is, in the software

A bottoms-up approach is designed to allow users to get precisely the information they need precisely where they need it: within the software they are using to plan, such as the Exposure Time Calculator (ETC) or Astronomers Proposal Tool (APT).

In this strategy, every field in APT has an accompanying button that provides a one-line explication when moused over and then includes one or more links to detailed information. Those links may then link to a greater depth.

As an example, below is a screen shot for the APT page for NIRSpec fixed-slit spectroscopy. Under **Target Acquisition Parameters** the user would have pop up a link to _About NIRSpec acquisitions_, and further down the ACQ Exposure Time field would link to:
- _About NIRSpec acquisitions_
- _About NIRSpec detector readout patterns_
- _How to calculate NIRSpec acquisition parameters_
- _NIRSpec Acquisition ETC_ [link to the s/w]

and then, for instance, _About NIRSpec acquisitions_ provides a quick summary page of critical information, with a link to _NIRSpec acquisition details_.

"Every Page is Page One"

We are adopting the EPPO (Every Page is Page One) strategy in designing the JWST technical web presence.

- EPPO pages are deigned to work out of sequence and out of context, so they make sense if a search takes you straight there.
- EPPO topics are self-contained and have a specific and limited purpose.
- EPPO topics stay on one level, meaning that a significant change in level of detail requires a new page.
- EPPO pages have many links and there is no single path through the pages; that is set by the user.
- EPPO pages conform to a "type" (such as an overview, or how-to, or reference material) and establish their context.
- EPPO documentation is intended to be minimalist in the sense of removing duplication and the unnecessary.

These may seem obvious to some, but codifying them helps to ensure we achieve our overall goals with the resources available.

Challenges

- Our information architecture has to support both top-down and bottom-up, with a clean, clear meeting in the middle. We want to enable users browsing off the web and starting at a high-level JWST page to access all information, as well as ensuring software users get details starting where they are.
- Both approaches have to use the same information. Duplication leads to conflicts and errors, as well as being close to impossible to maintain.
- Many tasks remain to prepare for JWST's launch in 2018 that also have near-term deadlines. We have limited resources and have to set realistic goals.
- User information is its own form of software, and so needs to be managed, verified, maintained, and so on.
- A key goal is interactive, searchable user information, and that is not so easy as it might sound.

User information and you

Tell us about your own thoughts and experiences as a user of on-line information and of facilities.
- What have you found works well or definitely does not?
- Do you have role-model websites to point us to?
- What do you find limiting or frustrating in your searches for technical information?
- Do we need to include small screen (smartphone) access? That involves extra work and it is not clear it is a requirement.

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