



JMMC-MIN-2600-0012

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JMMC

ESO/JMMC COLLABORATION : SEARCHCAL TECHNICAL DETAILS DISCUSSION

Teleconference, Feb 19th 2008

Participants:

*Pascal BALLESTER
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Absentees:

Excused:

1 Goal

The goal of this meeting was to collect ESO technical answers to JMMC technical questions, following the analysis of the ESO requirements and JMMC preliminary answers expressed in the document referenced as JMMC-GEN-2600-0001, in order to evaluate the technical feasibility of the JMMC/ESO collaboration on SearchCal.

During this preparation meeting to “ESO/JMMC Calibrators Workshop”, scheduled the 5th and 6th May 2008 at OCA, Nice, France, no decisions will be made, as scientific requirement should be collected before.

2 □ Discussions

2.1 □ What is the format of the ESO bad and known calibrators list ?

Those lists are provided in ASCII format, of about 5000 entries. An example will be provided by ESO.

The current version of the SearchCal server is already able to use local ASCII catalogs, but further investigation is needed in order to validate compatibility/adaptability with ESO ASCII format.

2.2 □ On which side of the SearchCal software should the finding algorithms and calibrators list be embedded ?

In the current version of SearchCal, local calibrator lists and finding algorithms are hosted on the server side or our software. If there is a science requirement to execute the tool standalone, ESO would ask to integrate those parts in the client part of SearchCal.

This would require a massive rewrite of the current version of SearchCal to make it a true stand-alone application as required by ESO, as our server is written in C/C++ and the required ESO version should be in Java only.

2.3 □ Is a local mirror of the SearchCal system (client and server) acceptable for ESO “stand-alone” requirements ?

No. In order to be usable for operational mode (at Paranal), SearchCal should be refactored to become truly stand-alone. Scientists will have to define use-cases to further define operational mode requirements.

In the current version of SearchCal, the client is only a front-end to our server, and thus has no ability to query local databases. Our server is the database-querying engine, and could be customized to query databases stored locally. But a network connection is still needed between the client and the server, thus breaking the ESO “stand-alone” requirement.

2.4 □ Is the Java WebStart distribution system compatible with ESO requirements ?

As ESO would like to embed SearchCal in P2PP, we will need to provide them with a unique JAR file instead.

SearchCal should be customized in order to be built this way, but further investigation is needed in order to validate feasibility.

2.5 □ Is the SearchCal output format compatible with P2PP as input file ?

SearchCal is able to output CSV files and interoperable VOTables files. An example will be provided to ESO.

A conversion tool between the standard VOTable format and the proprietary P2PP “pfile” key-value format should be developed, preferably by ESO as it owns this specific format. As VOTable are XML files, an XSLT sheet could be easily created to handle this requirement.

2.6 □ What are the requirements of the ESO expressed “Expert mode” ?

As guessed by JMMC, the current SearchCal seems to already provide “Expert mode”. Therefore the requirement would be to customize SearchCal for a "Call for Proposal" mode.

SearchCal could be easily customized to provide a simpler interface configured by parameters defining wavelength, baseline and magnitude band that reflect each ESO observing period instrumental configurations.

2.7 □ How SearchCal should be altered to provide ESO required tools ?

JMMC proposes to add the VO-compatible interoperability protocol PLASTIC to SearchCal, in order to provide ESO (and by the way, anybody else) with our data to interact with. ESO has not yet endorsed the PLASTIC protocol, and thus cannot validate this technical proposition.

Further more, detailed scientific use cases should be collected in order to clearly identify which tool are needed by the community.

Investigations should also be conducted to differentiate data potentially provided by SearchCal and those provided by ASPRO. For example, SearchCal is completely unaware of instrumental and/or observatory configurations while finding calibrators, and some of the described ESO tools clearly need geographical coordinates and date/time of observation (handled by ASPRO) to complete.

2.8 □ How SearchCal can be customized to be launched by P2PP ?

ASPRO launches SearchCal by linking against its binary and instantiating its main class and passing query parameters to it as XML.

Thus, the same mechanism is proposed to ESO, but ESO mentions that P2PP is not used to spawn instrument-dependent external applications.