JMMC

AppLauncher 1.1.1 - User Manual

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<td>2.0</td>
<td>11 May 2012</td>
<td>SLa</td>
<td>All</td>
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<td>26 Feb. 2013</td>
<td>SLa</td>
<td>First Chapter</td>
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1 Introduction

1.1 What is Interoperability?

Everybody’s computer nowadays run multiple programs at once. And users are eager to easily pass data back and forth between those programs. To achieve that, programs must understand common data exchange formats, and also speak the same common protocol.

For example: You are preparing your next observation in your favorite tool. What if you could easily get calibrating stars directly in it from another software you don’t even now yet? What if you could directly fit simulated observations to verify your strategy in one click?

This is interoperability: common data formats and communication protocols, allowing different programs to collaborate easily.

And AppLauncher\(^1\) is here to simplify even more your experience!

1.2 Presentation

SAMP\(^2\) is the dedicated Virtual Observatory protocol to ensure data exchange between compatible astronomical software running on personal computers. However, one SAMP weakness lies in its requirement to have interoperable applications already running in order to gracefully ensure communication between them.

To circumvent this requirement, the JMMC\(^3\) created AppLauncher, our dedicated application that ensures transparent communication between (even not yet running) SAMP tools! AppLauncher is a SAMP hub extension, able to automatically start dedicated applications ‘on demand’. It also provides a ‘Dock’ window with all JMMC applications and VO compliant tools.

1.3 Installation

Availability  
AppLauncher is freely available for download on the JMMC website at \http{http://www.jmmc.fr/AppLauncher}.

Requirements  
AppLauncher is based on Java\(^TM\)1.5 or greater, so your computer must have it installed (see \http{http://www.jmmc.fr/apps.htm} for more details). An Internet connection is required to start applications the first time, and recommended later on, even if operation may work without any.

1.4 Acknowledgments

As with all other JMMC software, you must acknowledge AppLauncher usage if it was of any help in your research. The official text is available from the Help menu.

AppLauncher itself is based on multiple OpenSource libraries and public services. We especially would like to thank:

- ASOV and IVOA, for their dedicated support to make the astronomical software community a better place!
- Mark Taylor of Bristol University in England, for his huge commitment to ease astronomers everyday life with such great tools as jSAMP\(^4\) library enabling easy yet reliable inter-application data exchanges;
- jMCS\(^5\), the core JMMC graphical interface library, providing lots of missing functionalities in Java\(^TM\), either developed internally or by incorporating third-party libraries, to help our end-users feel right at home using our apps.

\(^1\)http://www.jmmc.fr/applauncher  
\(^3\)Jean-Marie Mariotti Center (a.k.a as JMMC) - http://www.jmmc.fr  
\(^4\)http://software.astrogrid.org/doc/p/jsamp/1.3-2/  
\(^5\)http://www.jmmc.fr/dev/jmcs
1.5 Method

AppLauncher works by simulating well-known SAMP-compliant applications (such as Aladin, TOPCAT or JMMC tools). Further technical details are described in a paper (http://www.jmmc.fr/doc/approved/JMMC-PUB-2220-0001.pdf) and a poster (http://www.jmmc.fr/doc/approved/JMMC-POS-2220-0001.pdf) both presented in 2011 at ADASS XXI in Paris.

1.6 Abbreviations and acronyms

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<th>Description</th>
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<tr>
<td>JMMC</td>
<td>Jean-Marie Mariotti Center, the french center for infrared and optical interferometry, providing support for the users of the astronomical interferometers currently in operation around the world</td>
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<td>ASOV</td>
<td>Action Specifique Observatoires Virtuels France</td>
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<td>IVOA</td>
<td>International Virtual Observatory Alliance</td>
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<td>SAMP</td>
<td>Simple Application Messaging Protocol, defined by IVOA</td>
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<td>JNLP</td>
<td>Java\textsuperscript{TM} Web Start application deployment technology from Sun</td>
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<td>jMCS</td>
<td>Java\textsuperscript{TM} Mariotti Common Software</td>
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<td>CDS</td>
<td>Centre de Donnees Astronomiques de Strasbourg, providing Aladin software</td>
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<td>ADASS</td>
<td>Astronomical Data Analysis Software and Systems conference cycle</td>
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2 How to use AppLauncher

In Fig. 1 you can see AppLauncher main window, displaying some of the compatible applications available to you. If you click on any of these icons, the latest official version of the corresponding application will be downloaded from the Internet (if needed) and started. If you are not connected at this time, the last launched version will be started. Please note that you at least need an active Internet connection the first time you want to start any application.

Figure 1: Main Window

If you click on the small Info icon next to each application icon, a detailed description of the corresponding application will be displayed.

2.1 First run

The first time you launch AppLauncher, a Welcome window (see Fig. 2) will be shown, briefly explaining AppLauncher purpose and main options.
Welcome to AppLauncher !!!

And thank you for your confidence in the JMMC automatic SAMP application launcher.

- First, an auto-test procedure will proceed (after you clicked OK) to confirm everything is fine for AppLauncher to work well;
- You can customize (among other things) which applications are shown in the Dock using the preferences window;
- Further documentation is available directly from the Help menu, so don’t hesitate to have a look;
- You can easily provide (greatly appreciated) feedback and bug reports to us from the dedicated entry in the Help menu.

We hope you will appreciate using AppLauncher as much as we had fun making it!

Figure 2: AppLauncher Welcome Window
Once you click OK, an auto-test routine will automatically proceed to ensure everything is correctly set up to start SAMP applications on demand. If the test went fine, you should see the window in Fig. 3. You can also manually relaunch this test later, and also further configure Java WebStart, from the Help menu.

![AppLauncher Auto-Test Window](image3)

Figure 3: AppLauncher Auto-Test Window

### 2.2 Usage example

To better illustrate the way AppLauncher works, start by clicking the SearchCal icon. You should see the window in Fig. 4 stating that SearchCal is being started. Once SearchCal is available, click the Get Calibrators button and wait while results appear onscreen. Once done, use SearchCal Interop menu to send those results to any of the available applications (i.e. either Aladin or TOPCAT) and watch AppLauncher automatically starting the desired application, then forwarding SearchCal results after a while!

![AppLauncher Starter Popup](image4)

Figure 4: AppLauncher Starter Popup
2.3 Configuration

*AppLauncher* offers a limited set of applications by default. You can easily customize this using the *Preferences* window as shown in Fig. 5. Some applications can also be used in beta version (when provided by their authors). You can also disable a whole category if needed.

Some general settings are also available to:

- show or hide the Dock window on startup (if you only need the *SAMP* simulation aspect of *AppLauncher* and not the visual dock);
- automatically report any future unknown applications detected, without asking for explicit permission before transmission;

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Some general settings are also available to:

- Name: SearchCal
- Description: Find Interferometric Calibrators for Optical Observations
- Homepage: [http://www.jmmc.fr/searchcal](http://www.jmmc.fr/searchcal)
- Release Notes: [http://www.jmmc.fr/searchcal/releasenotes.htm](http://www.jmmc.fr/searchcal/releasenotes.htm)
- Authors: Brought to you by The JMMC Team
- Version: 4.4.1
- Release Date: 30/01/2012

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Figure 5: AppLauncher Applications Preference
• restrict SAMP simulation to your selected application set, or to all known application (very useful to
discover new tools);
• show or skip the warning message when you are about to quit AppLauncher and kill the SAMP hub
by the way.

Please note that AppLauncher must be restarted for those general settings to take effect.

2.4 Adding applications

In case you use some SAMP-compliant applications that AppLauncher does not know of yet, it is smart
enough to discover them, and offers you to report them using the form presented in Fig. 6. We are eager to
add all kinds of applications to AppLauncher, so don’t hesitate to report ! To do so, you can also choose to
automatically report any future unknown applications.

Figure 6: AppLauncher Report Form

Please note that preliminary support for native applications (i.e applications not directly available from
the Internet as JNLP, thus requiring you to download and install it manually) has been added in version
1.1. In order to handle such applications, you have to provide AppLauncher with the command-line path to
the application executable once installed, using either:

• the application’s Command-line Path text field in the Preferences window (see Fig. 5);
• the dedicated dialog box (see Fig. 7) that will appear the first time you solicit the application through
SAMP.

2.5 Quitting

AppLauncher is meant to be the first application you launch beginning your work session. If so, it takes
the responsibility to initiate all the SAMP-related environment (i.e. the hub) for the other applications. So
when you are about to quit AppLauncher, shutting down the hub by the same time, you are informed of
this with the window shown in Fig. 8. You then have the possibility to change your mind if you feel so !
Figure 7: Command-line Dialog Box

Figure 8: AppLauncher Quit Alert
2.6 Other functions

As acknowledged in section 1.4, AppLauncher makes extensive use of jMCS, a JMMC OpenSource initiative that provides lots of neat features, such as:

- a deep platform integration to make applications feel native on any of the 3 main desktop operating system that are Mac OS X, Linux or Windows;
- an embedded user manual viewer;
- the ability to send feedback reports (either to signal software bugs, documentation typos, user questions or evolution requests), that will always be very welcome by the JMMC Technical Team;
- a dedicated console window to monitor application execution and statuses;
- a way to directly copy-paste application acknowledgements to your scientific papers;
- a standardized About Box for further application details.

3 Conclusion

As usual, the JMMC Technical Group put its best in the creation of AppLauncher. We hope it will be of great help for your everyday work, and once more don’t hesitate to give us feedback!