The Skysoft Project

C. Baffa, E. Giani, A. Checcucci

INAF - Osservatorio Astrofisico di Arcetri, Largo E.Fermi 5, 50125 Firenze, Italy

and IRA-CNR, Largo E.Fermi 5, 50125 Firenze, Italy

Abstract. We present the Skysoft project. Skysoft is a YAASD (Yet Another Astronomical Software Directory), but with a different overall approach.

To be useful, Skysoft needs to be a long–lived project, setting little pressure for maintenance, imposing a very low nuisance level to the developers community, and requiring a low maintenance cost. Our aim is to design Skysoft as a community–supported directory, to which everyone can contribute, both developers and end–users.

1. Introduction

Skysoft[1] is an astronomical software directory, but with a peculiar overall approach. Our choice is to design this site as a community supported directory. All people can contribute, with software news, user's views, comments and bugs/refuses notifications. Developers should post a brief description of their product, with the classification which can ease the search and retrieval of software projects.

2. What is Skysoft site about?

Skysoft is designed as a community supported directory. The idea is that, like a chat session, content remains timely because of frequent user interaction. Users and developers are invited to contribute with software news, user's views, comments and bugs notifications. This site is designed so that software developers acquire more visibility because of astronomical context. Developers can post a brief description of their product, with the classification which can ease the search and retrieval of software projects.

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[1]`http://www.skysoft.org`

3.   Why not a traditional site?

Traditional sites, such as ASDS[2] and ASCL[3] are valuable, and widely used. But we think they are most useful in the standard context of mainstream data analysis and reduction, where ten-twelve applications do 95% of the work, and remain there for many years. It is difficult for traditional sites to easily accommodate new ideas, new approaches for less-used telescopes+instruments. For instance, during data mining, we have found several interesting approaches to the same specialized problem (not addressed by mainstream tools), but which were rewritten over a decade by different groups, each without knowledge of others' efforts.

We propose a faster and more flexible approach as a complement to traditional sites. Also we do not need to have all the expertise in all the fields Skysoft covers: it is enough that such expertise resides in the users' community!

4.   What is the Skysoft approach and what are its possible advantages?

Skysoft is intended to be built by the community which uses it! If you think that Skysoft lacks some information you deem useful, just add it! Many others can benefit by your (minimum) effort! Plus you gain publicity for your work!

Our aim is to build a site useful for astronomers and instrument developers, and to make this utility widely available, easy to use, and up-to-date with the latest developments. We cannot cope with the enormous amount of information and expertise needed. But the community as a whole has all the necessary competence! If we all share our 2 cents of informations, we will build a site more useful for everybody.

We started with a small amount of software we found in the net, just to boostrap the site. The selection was rather arbitrary, based on our own knowledge. Obviously, we have missed important informations: please add it and help us to improve the site! We are ready to add a newsletter, an event calendar, some discussion lists, and more.

5.   So do I absolutely need Skysoft?

No. Everything which is available at Skysoft site can be found using other Astronomical software collections, or asking Google, or asking some colleagues and friends. But wait, my last Google interrogation returned 112000 documents! A more specialized site can help speed up things significantly!! We aim to be a first choice in search process!

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[2]`http://asds.stsci.edu`

[3]`http://ascl.net`

6. Present structure

The Skysoft Software Database has been structured as a tree. This structure is wrong in our view: the software has a structure by far too complex to be represented in such a bidimensional way. Consideration of Database implementation and ease of consultation led us to strip down such a complexity.

Here there is the database structure at the time of last modification. By the dynamic nature of Skysoft approach, this can be outdated.

- Data reduction and Handling
  - Large general packages
    - add-on for large packages
  - Data Handling and Display
  - Data Conversion
  - Statistical packages
  - Utilities
- Data Archiving
  - Databases
  - Query Languages
  - Structure Organizer
- Astronomical Tools
  - Large Tools collections
  - Sky maps
  - Coordinate conversion
  - Celestial Ephemeris
  - Observations planning
  - Physical simulation and modelling
- Developer's Tools
  - General Tools
  - Device Drivers
  - Human Interfaces
  - Data Handling libraries
  - Data Archiving libraries
- Management
  - Time allocation
  - Telescope pointing
  - Project management
- Didactic Tools
  - Digital Orreries
  - Learning tools
  - Amateur's tools

References

Hanisch, R. J., Payne, H. E., and Hayes, J. J. E. 1994, in ASP Conf. Ser., Vol. 61, ADASS III, ed. D. R. Crabtree, R. J. Hanisch, & J. Barnes (San Francisco: ASP), p.41

Nemiroff, R. J.; Wallin, J. F., 1999, BAAS, Vol. 31, p.885

Figure 1.   The Skysoft front page