

## The Communicating Astronomy with the Public journal — A study from the IAU DIVISION XII Commission 55 CAPjournal Working Group

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### Abstract

The public communication of astronomy provides an important link between the scientific astronomical community and society, giving visibility to scientific success stories and supporting both formal and informal science education. While the principal task of an astronomer is to expand our knowledge, disseminating new knowledge to a wider audience than just the scientific community is becoming increasingly important. This is the main task of public astronomy communication: to bring astronomy to society.

Here we present the results of a study from the IAU DIVISION XII Commission 55 Communicating Astronomy with the Public Journal (*CAPjournal*) Working Group for establishing a partly peer-reviewed journal called *Communicating Astronomy with the Public*. The first issue of the journal was released in October 2007 and the journal will be published quarterly in full colour and online. This project is vital for the intra-community exchange of information. *CAPjournal* will make it possible to learn from others in the same profession and with the same needs, as well as give authors a chance to present their information, experience and knowledge in a coherent and meaningful fashion.

### Introduction

The CAPjournal Working Group<sup>1</sup> under IAU DIVISION XII Commission 55<sup>2</sup> was created in 2006, following an idea to create a new journal on Communicating Astronomy with the public. This Working Group has made excellent progress and now has widespread support for the initiative, including that from the editors of *Astronomy Education Review*. Further information can be found at the Working Group's web page and the *CAPjournal* web page<sup>3</sup>.

The IAU DIVISION XII Commission 55 Communicating Astronomy with the Public Journal Working Group prepared a study assessing the feasibility of the *CAPjournal*. The conclusions were inescapable. The present situation of public astronomy communication shows a clear need for a peer-reviewed publication addressing the specific needs of the public astronomy communication community.

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<sup>1</sup> <http://www.communicatingastronomy.org/journal>

<sup>2</sup> <http://www.communicatingastronomy.org>

<sup>3</sup> <http://www.capjournal.org>

Public communication of astronomy is a fast growing field of science communication, notably in Europe, but China and India may be the next emerging science communication “markets” as publishers are experiencing a flood of science coming from there. Latin America may also be a candidate for development in this field. The next few years will be extremely important for astronomy communication and education. The year 2009 will be the International Year of Astronomy, and will be a unique platform to inform the public about the latest discoveries in astronomy as well as emphasising the essential role of astronomy in science, education and culture.

Several agencies, research institutes, astronomy departments and observatories around the world have press officers and communication specialists. Science centres and planetariums have an important role to play in informal astronomy education, often producing high quality educational materials. However, as the astronomy communication community expands globally it becomes increasingly important to establish a community of science communication experts. The four *Communicating Astronomy with the Public* conferences have been very successful in raising the profile of astronomy, but a permanent forum where professional expertise and know-how can be presented and preserved for posterity is needed.

## Publishing in the global marketplace

Academic publishing in a professional field is an important form of information exchange and discussion. The publishing business is changing rapidly in response to market forces arising from intense globalisation and the overwhelming popularity of the internet, bringing significant benefits (despite some severe disadvantages) to publishers. This changing landscape must be factored into the planning of a new journal. Changes in society drive new markets and as a consequence publishers need to devise new business models. The new environment is here to stay, and publishers who embrace the changes in technology and target group behaviour are the ones who will benefit the most.

There is pressure, especially from the scientific community, to allow broader access to scientific information in general. This is the main driver for the “open access” movement. However one time-honoured principle stands: peer-review continues to provide the stamp of quality for scholarly articles. This principle will be upheld by the *CAPjournal*.

Among the perceptible changes in the publishing industry are:

- Globalisation means that publishing can be moved to larger scales with cost-savings as a consequence. One example is the use of more outsourcing (typesetting, printing, services etc).
- Publishing houses are merging to form larger and larger companies that can embrace the globalisation and exploit the mobility of manpower and services. More mergers will happen over the next few years.
- Publishing customers, especially for e-publishing, are becoming larger as libraries form consortia.
- Data management and workflow is — as in many other disciplines — a major issue. Providing access to the right publications at the right time is a must in today’s world.

- Scientists should both write and read more articles.
- Globalisation forces publishers to develop new publishing standards, and modify existing ones to benefit from new technology. This can be seen as moving from the traditional model of “2-dimensional printing” to a contemporary digital “3-dimensional publication” with added value such as cross-references, links to catalogues and full multimedia capability (movies, audio, data from graphs). Today’s audience wants products “on-demand”, i.e. they want them to be immediately accessible, to be relevant to their needs and in an acceptable format.
- There is pressure, especially from the scientific community, to allow broader access to scientific information in general. This is the foundation of the “open access” movement.
- The production of scientific literature will move closer to the customer. Print-on-demand alleviates the need for storage capacity with the publishers, reducing production time, and enabling a new level of flexibility (including updating, tailoring and more economic production).
- The mere existence of a well-tagged publication in cyberspace will enable a higher level of pull marketing (instigated by the consumer as needed) instead of the traditional push marketing that is increasingly overlooked by a customer swamped with information.
- Involving and sourcing the capabilities, of the community (to rank popular articles for instance) is becoming increasingly necessary.

All these points are important for existing journals, but even more pertinent for new, emerging journals — particularly one that addresses public communication with content that regularly touches on the issues outlined above.

## Objectives of the *CAPJournal*

The general purposes of scientific literature include:

- Documenting knowledge.
- Educating peers.
- Providing a basis for discussions.
- Compelling further progress.
- Establishing priorities in a field.
- Furthering careers (through documentation of the excellence of the individual).
- Helping to avoid the duplication of effort.

These objectives have also been adopted by the *CAPjournal*, which aims to publish material from different areas of astronomy communication in a scientific journal format, with open access. As an example, we expect that the journal will prove very useful to those involved in public communication of events surrounding the International Year of Astronomy 2009. The *CAPjournal* also serves as a repository of ideas, projects, activities, exhibitions and other key topics for the national nodes of the IYA2009.

Having a peer-reviewed journal for our field, such as *CAPjournal*, is an important step towards gaining recognition for the astronomy communication trade. To facilitate the information dissemi-

nation and recognition of the journal and its content, *CAPjournal* is indexed by the Astrophysics Data System (ADS).

## Target group

The target group for the *CAPjournal* includes the following groups:

- public information officers;
- the planetarium community and other informal astronomy educators and communicators;
- the IYA2009 network;
- informal educators;
- science communication researchers;
- amateur astronomers;
- university students;
- the scientific (astronomical) community;
- decision makers.



Figure 1 – The cover of the inaugural issue of the *CAPjournal*.

## Key features of the *CAPJournal*

The journal will be published quarterly and is divided into nine main sections dedicated to:

1. News;
2. Announcements;
3. Letters to the Editor;
4. Reviews;
5. Research & Applications;
6. Resources;
7. Innovations;
8. Best practices;
9. Opinion.

Most of the sections should be self-explanatory, but the “Research & Applications” section contains peer-reviewed science communication research articles. “Reviews” will cover reviews about astronomy and science communication relevant topics and products such as books, DVDs, television programmes, magazines, websites and more. “Announcements” covers announcements of astronomy and science communication events (conferences, meetings etc.), training events, job postings, training opportunities or courses offered etc.

The full journal issues and individual articles are available on the *CAPjournal* website in PDF format. Submission guidelines, background and further information, with additional options to comment on and discuss the *CAPjournal* articles online are also available. We are happy to announce that the journal is free in both print and online (on the web page, click on “Subscription” to subscribe). We intend to keep the journal free for as long as we can find willing sponsors to pay for the printing costs (all manpower is based on volunteer assistance).

## Conclusions

The present situation of public astronomy communication shows a clear need for a specific publication addressing the needs of the public astronomy communication community. We would like to see the astronomy outreach community deeply involved in this journal’s evolution and production and welcome submissions.

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