

Broadcasting Astronomy: *The Stars Meet on the Radio*

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Summary

In this paper we describe our project *Tutti Dentro — Le Stelle si incontrano in Radio (Come in everybody! — The Stars meet on the Radio)*, an Italian radio show about astronomy and space. The format involved celebrities, young astronomers and a network of 95 FM and web radio stations during the period July 2007 – January 2009. We will explore its structure, the language and the strategies adopted, along with the technical equipment and the software for recording sessions and editing. Finally we will describe the response from celebrities, radio stations and listeners. Our results could be a useful reference for those wishing to create similar radio programmes to deliver astronomy to a wider audience.

Introduction

“We live in an era of unprecedented scientific progress. The growing impact of technology has brought science ever more into our daily lives.” Lars Lindberg Christensen¹

Our project *Tutti Dentro — le Stelle si incontrano in Radio*² (*Come in Everybody — The Stars meet on the Radio*) started in April 2007, following previous successful experiences as astronomy communicators using the web and Italian local radio stations. Our aim was to plan and then produce a new weekly radio programme involving celebrities, young researchers and everyone interested in space. In contrast to previous broadcasts, we decided to avoid the “old formula” based on the scientist talking to and teaching people in a top-down, vertical communication path, with the scientist set above and apart from the audience, and so we aimed for a horizontal connection between the speakers and listeners, typical of commercial and private radio broadcasting, with all parties on an equal footing. Once these guidelines were established, we selected the topics,

wrote the scripts and e-mailed celebrities to fix dates for the recordings of the telephone interviews. In each programme, a “star” of music, sport or television talked about their feelings for the Universe, gave their opinion on the current topic and on other space subjects. In the same programme a young astronomer would also talk about their own work, the technological side of space exploration, and their professional and private life. From July 2007 to January 2009, we produced 52 programmes that were broadcast by a network of 75 local FM radio stations, covering more than half of Italy, and by 20 web radio stations.

The format: language, music and structure

Our format had three basic aims:

- to target a wide audience, specifically listeners aged 20–60;
- to establish a horizontal communication connection with the audience and keep

as close as possible to the “stationality” (i.e. the “personality”) of each radio station; and

- to maintain and be part of the distinctive “flow” of the daily radio programming.

To meet these aims, given the many radio stations involved, each with its own identity, we adopted a general approach that allowed us to integrate dialogue and music. We used simple and informal language, neither too popular nor too intellectual or scientific. Jingles and songs create breaks and keep the momentum of the show going. The playlist included a selection of songs from the 1980s to avoid musical identification with a specific generation. The structure of each programme, whose length was 30–35 minutes on average, was divided into a sequence of five subsections called “modules”, each five to eight minutes long. The five modules were:

- a) a small introduction and a song to present the weekly topic;



Figure 1. On December 2008 Tutti Dentro won the eContent Award Italy, in the eScience Category, as the best content in digital format.

- b) the first part of the interview with the celebrity to promote his/her work and interests;
- c) a song or a jingle as a break to introduce the second part of the interview with the celebrity dedicated to the topic of the programme, and other space subjects;
- d) a musical break and an interview with the researcher or scientific journalist; and
- e) the final part where we sometimes read out funny questions and answers collected from our listeners on our website and from Yahoo Answers Italy.

The a), d) and e) modules were, for the most part, scripted: we wrote them using astronomy books, scientific articles and from our own personal knowledge. Almost none of the celebrity interviews were the results of written questions, so as to give a spontaneous feel.

Format strategies

- a) Spicing up the topic: a question introduced the topic, sometimes in a provocative fashion. For example: "The sacrifice of animals in the 1960s for the conquest of space: an unavoidable choice or a violation of rights?"
- b) Talking to everybody: following the "infotainment" philosophy, we did not explain or teach, but we gave information in an entertaining context. In a sense we returned to the traditional triad "to educate, inform and entertain", coined by John Reith (BBC) in the 1920s.
- c) Changing the popular image of the astronomer: young researchers played

the leading role in representing a new, dynamic and current view of space science, in contrast with the traditional image of the old astronomer tied to his telescope, watching the stars and totally uninterested in ordinary life and people.

- d) Updating the popular image of astronomy: when possible, we underlined the application of space technology to every-day life — mobile phones, satellites for telecommunications, X-ray scanners etc.
- e) Involving celebrities: for over a year we involved Italian celebrities in our programme, such as the singers Riccardo Fogli and Mario Biondi, the actor Carmine Scalzi, who was with us from the first programme; the international chef Gualtiero Marchesi, and many other famous people. Their popularity attracted the attention and curiosity of radio listeners, and of course of the radio station managers themselves.

Technical equipment and software

Recording sessions were made in our private home studio, consisting of two Behringer cardioid microphones (B1 and C1 models); a Behringer Xenyx 1622FX mixer; a Behringer Composer Pro MD 2600 multiprocessor (acting as a compressor, limiter, de-esser and peak limiter). A Behringer UCA USB external sound card connected the mixer to a desktop pc for recording.

To obtain better results during the recording sessions, we adopted the following techniques:

- a) a back-to-back arrangement for the two microphones to avoid leakages;
- b) keeping a minimum distance between microphones and walls to reduce echoes;
- c) using the enhancer function (a light noise gate) available on the Composer to suppress background noises and microphone self noises.

We recorded in wave format, 44 kHz, 32-bit float. The files were edited using the audio editor Audacity to cut, paste, mix and normalise the volume. The free encoder SCMPX was used for mp3 conversion at 192 Kbps, stereo, 16 bit. We divided each programme into two mp3 files, so that every radio station could insert their jingles and spots in between. Files were published on the web, free for download by the network of radio stations. A striking example of convergence between new and traditional media.

Response and results

A few days after the press release announcing the development of the project, 30 radio stations contacted us for further information. After a few months, 75 FM radio stations had joined us. They were fascinated by the format involving celebrities, stars and planets, with an informal but, at the same time, professional style. In January 2009 we counted 95 local and web radio stations, with an FM coverage of more than half of Italy and about 30 000 listeners a week. The majority of local FM radio stations (36%, see Figure 4) broadcast *Tutti Dentro* in the middle of the morning (from 9:00 to 12:00), the typical time slot dedicated to information, news and talk. A small fraction (14%) broadcast us in the early afternoon (from 15:00 to 17:00), and only one local radio station in the mid-afternoon, the time slot dedicated to younger listeners, especially teenagers. It was evident they considered our programme as an information product addressed to adults (30–55) and middle-aged people (55–65). Our target was the age range 20–60: we missed the 20–30 range, but hit the 30–60 range right in the middle.

Many of the radio stations included our photos and biographies on their own websites as if we were members of staff and listeners wrote e-mails or phoned the local radio stations instead of writing directly to us. This confirmed our insertion into the flow of each radio station, as was our aim.

Our sole regret was the lack of synchronisation with the many radio communities, something that is impossible to establish without a live broadcast. However, the pre-recorded format was the only way to



Figure 2. Tutti Dentro homepage. Credit: Authors.



Figure 3. Tutti Dentro blog. Credit: Authors.

be broadcast by dozens of radio stations and reach a wide audience. Each week we published the current programme on our public website (Figure 2), reporting about 100 downloads a week.

In 2008, we opened the *Tutti Dentro* blog (see Figure 3): with 1800 hits a week, it became a place for discussing topics we could not talk about during the programme, due to time constraints and format requirements.

Some months ago, we also created a group on Facebook, with over 100 fans in five days and 20–30 hits a week. Soon it was clear that radio listeners, bloggers and the Facebook group formed three different communities: listeners preferred to listen and write to their radio stations, bloggers preferred to download the programmes from our website and then surf the blog

looking for other interesting topics, while Facebook followers just wanted to be informed about space research news. In other words: different media, different communities and different needs.

Last but not least, the celebrities: we discovered that many of them were very interested in space travel, science fiction and astronomy in general. In their childhood, some of them had dreamt of becoming astronauts, some had imagined themselves on other planets. Our interviews often revealed unknown and introspective sides of their life, giving an unusual and original feeling in comparison with standard television and radio interviews. In many cases their words, together with their enthusiasm for space, became spots to promote scientific research in general. A strong result in itself.

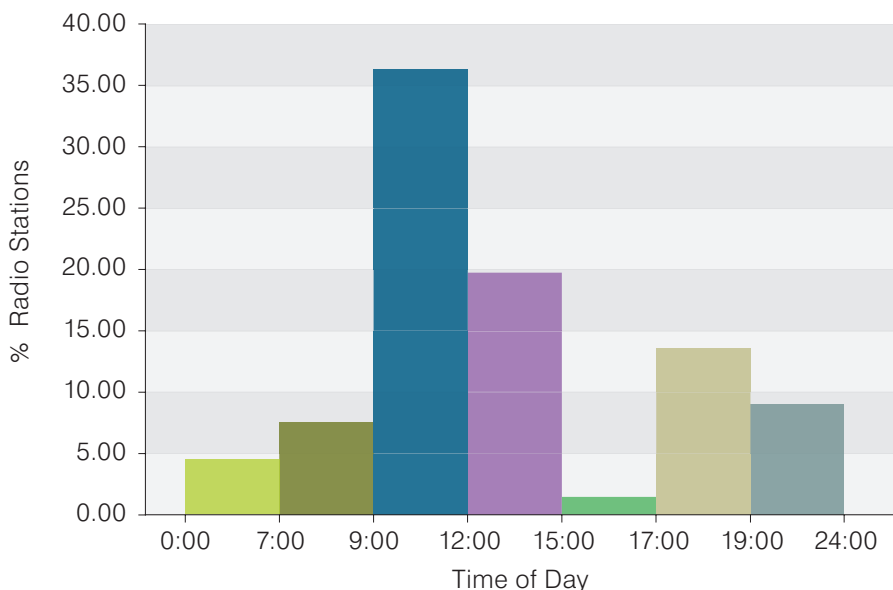


Figure 4. Most of the local radio stations broadcast Tutti Dentro in the morning and in the early afternoon. Credit: Sabrina Masiero.

Conclusions

Communicating astronomy using new technologies and radio broadcasting was the main goal of our project, avoiding the old formula of a radio science programme based on long interviews with a scientist, and breaking with the traditional image of the expert who teaches science to the people. We adopted an original formula and came close to modern radio language, extremely youthful and spontaneous, and managed to insert our product into the radio flow. Our experience confirmed that radio is a great medium to spread astronomy to a wider audience in new and non-traditional venues. We hope that the format, strategies and results described in this paper could be useful to anyone interested in science radio broadcasting and involved in future astronomy radio programmes.

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Notes

- ¹ Lindberg Christensen, L. 2006, *A Hands-on Guide for Science Communicators*, (Springer: New York)
- ² <http://www.tuttidentro.info>
- ³ <http://tuttidentro.wordpress.com>

Biographies

Luca Nobili is an astronomer and scientific communicator for the Italian Institute of Astrophysics (INAF), radio speaker and teacher of "Theory and Techniques of Radio Languages". Since the year 2000 he has been involved in the production of the weekly astronomy Web and radio bulletin *Urania*, broadcasted by over 100 Italian local radio stations. He also talks about astrophysics in the national Italian radio station Radio DeeJay.

Sabrina Masiero is a PhD student in the Dept. of Astronomy at the University of Padua, Italy. The project *Tutti Dentro* is the topic of her PhD Thesis in communicating astrophysics. She is the Italian translator of the official IYA2009 cosmic comic book *The Lives of Galileo* by Fiami.