

THE II NATIONAL WORKSHOP OF  
SKA SCIENCE AND TECHNOLOGY  
BOLOGNA, DECEMBER 3-5, 2018

# THE "WOW" AND THE "HOW"

## The challenge of effectively communicating SKA

Outreach activities of the PRIN-INAF project  
FORmation and Evolution of Cosmic STructures with Future Radio Surveys (FORECaST)

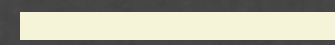
STEFANIA VARANO - INAF INSTITUTE OF RADIOASTRONOMY



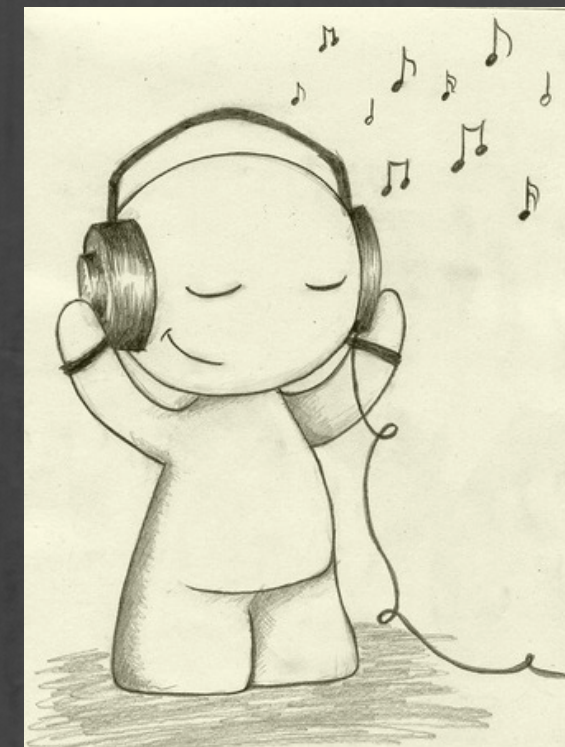
# AN OLD ACQUAINTANCE

For scientists and technologists

Our community have been hearing and talking about the SKA project for years now.



But do the public know about SKA at all?



SKA?  
No, I prefer  
classic music

# WOW

- The grandeur of the project and INAF's role in it
- The remote and fascinating places that will host the instruments
- The enormous scientific opportunities and expectations

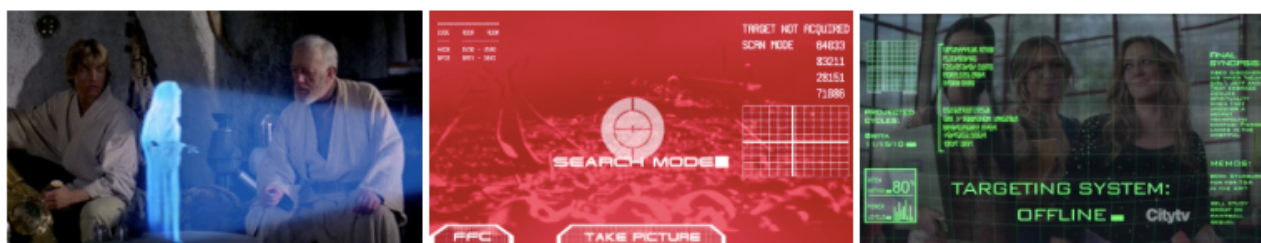
# HOW

- The peculiarities of studying the Universe through invisible data
- The way data look like and how they are handled
- The difficulties of dealing with huge amount of data

# Virtual reality

Bringing the public to SKA places and giving details about the instruments and the scientific goals in an immersive, enjoyable experience. Introducing the reasons of the sites selection and some social aspects

**A synergy of human and financial resources of all Outreach WPs within INAF PRIN, both SKA and CTA**



Cosa viene mostrato	Scopo della sezione	Note	Cosa chiedere	Tempi e costi	Immagini prototipo
<p>Ci troviamo fuori dalla Terra che teniamo sulla mano sinistra. Con la mano destra puntiamo uno dei due luoghi (in evidenza sulla superficie) in cui sono localizzati i due progetti. Così con uno zoom medio atterriamo nella location scelta. Man mano che ci si avvicina si ha uno sguardo di insieme del luogo e della</p>	<p>In questo modo è possibile mostrare i luoghi in cui sono disposti questi strumenti. Inoltre è possibile mostrare quanto siano remoti i siti.</p>	<p>Caterina e Stefania devono definire una volta per tutte i siti del mini array di ASTRI e di SKA.</p>	<p>1) Questa scelta ha un costo aggiuntivo?</p>	<p>almeno 20 secondi</p> <p>0 euro?</p> <p>Noi pensiamo che questa cosa sia nel prodotto multimediale complessivo perché non troviamo una categoria nell'offerta multimediale da loro fornita</p>	

Autonomous exploration triggered by audio and video entries showing the telescopes and their features and the scientific goals of the PRIN projects involved

# Educational activities

SLOW INTERACTION

MICROLEARNING

Introducing some of the instrumental features one by one with dedicated activities

THE HOW



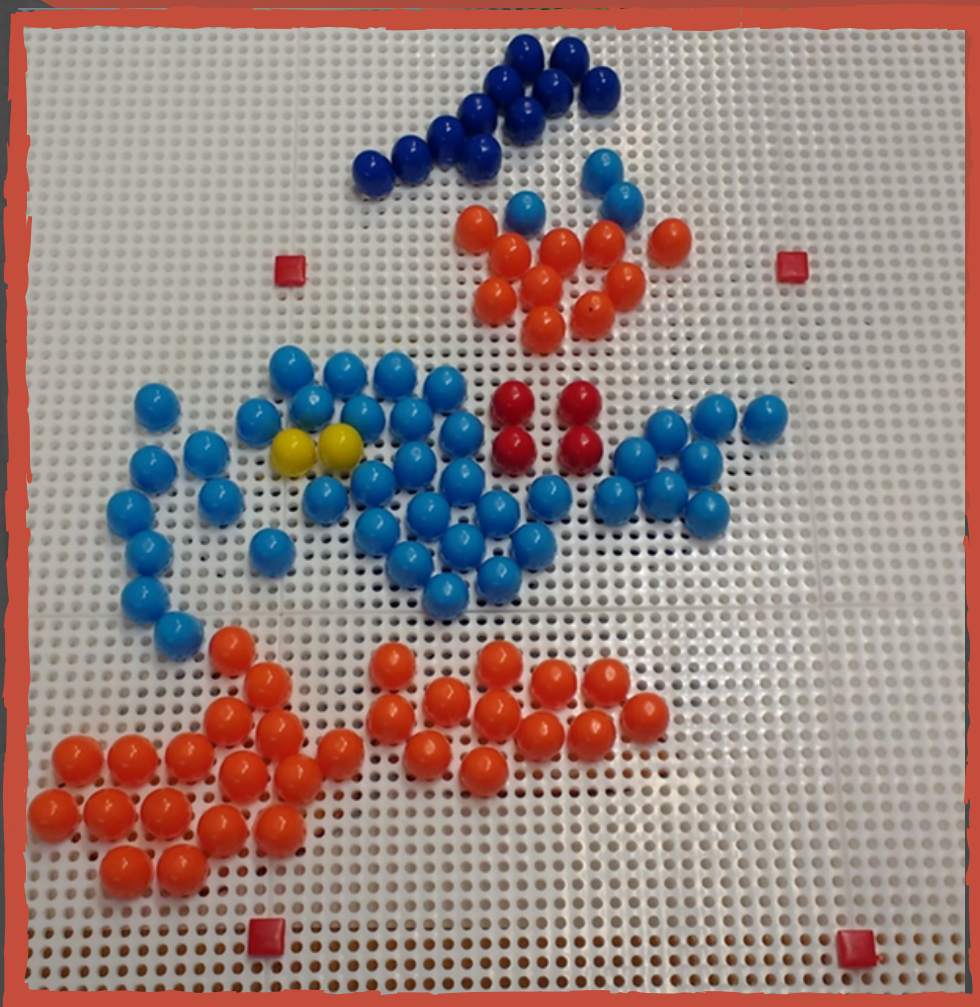


# TALKIN' ABOUT RESOLUTION

Pegs of different sizes represent  
larger and smaller pixels

Reproducing details is easier with  
the smallest pegs, but it is also tough  
and time-consuming

The general impression can also be  
efficiently achieved with large pegs  
(lower resolution)





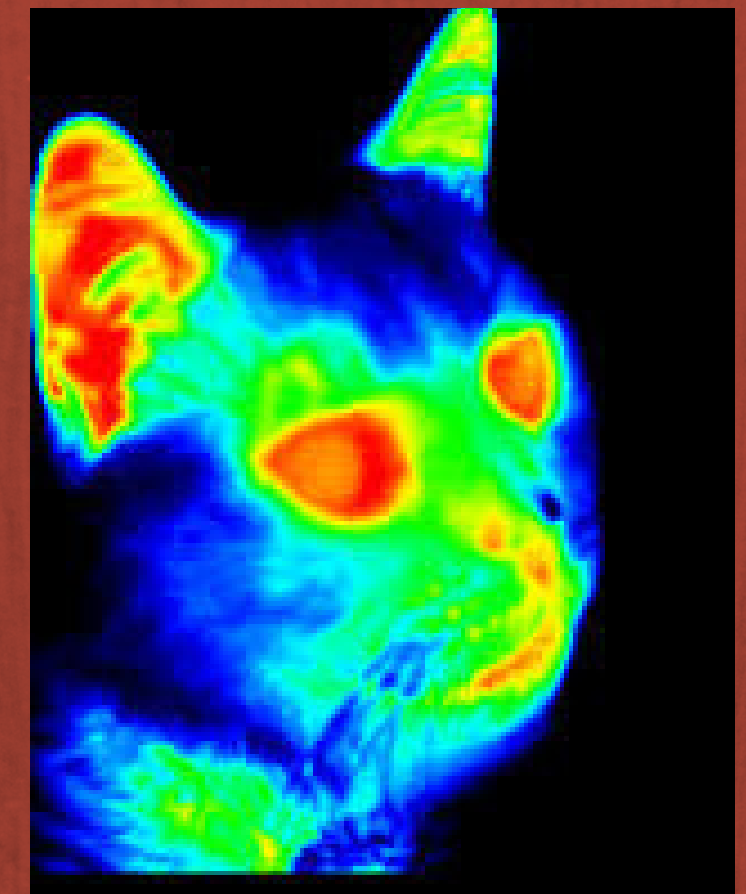
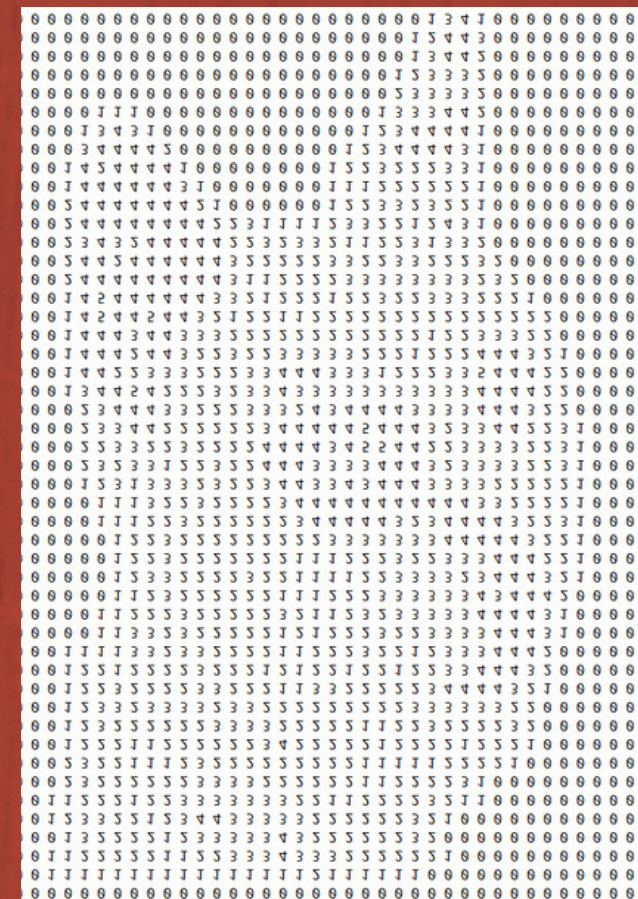


# HERE I PIXELIZE YOU!

How pixels represent the data detection

## HOW FALSE ARE THESE COLORS!

Introducing the *false colors* technique for the visualization of radio waves (and invisible data, in general)



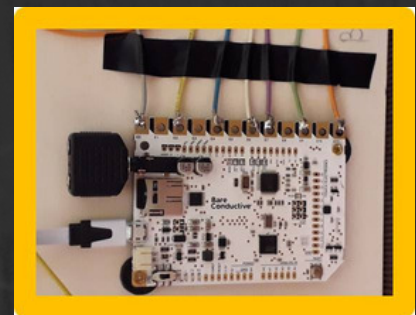
# SENSE THE UNIVERSE



A multisensorial  
representation of real radio  
data



IMAGE



TACTILE MAP

SONIC REPRESENTATION





# Trasmitter (fox) hunting

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How a radio telescope works

*Play (treasure hunt)*

*Tinkering*

*Making*

*Citizen science  
(electromagnetic pollution)*

**THE "WOW", THE "HOW" ...  
AND THE "BOW"**



THANK YOU!

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