

Imaginary Conference 2016
Workshop Presentation

Smartphones in Exhibitions



The Team

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Everyone has a smartphone...

How can we use them in a mathematics exhibition?

Audio Guide/
Additional
Info

Use as
“remote
control”

Use rotation,
motion or
location

Social Media
interaction

Use camera

AR display

Interact with
other visitors

Ground rules

Collaborative

Easy to use

You need
to be at an
exhibition

Clear
mathematical
lesson

Can't be done
better by "just
a website"

Feels cutting
edge

Feasible

Tensions: Should we...

...have visitors interact individually or in groups?

...have a central display, or just a virtual exhibit distributed across smartphones?

...gather people together for an event at a set time?

...have a single exhibit or spread throughout the exhibition?

...collect photos or personal data to accumulate/display?

Some Ideas

- Collaborative music creation / harmonies
- Birthday paradox: statistics and visitor matching
- Using selfies to create tessellations or transformations (e.g. in spherical space)
- Graph theory: e.g. colouring when every phone is a node, degrees of separation, travelling salesperson
- Game theory, e.g. Prisoners' Paradox
- Distributed computation
- Visitors are "numbers" or "operations" and have to find + arrange themselves to solve certain tasks

DEMO

<http://ic16.mathigon.org/slider/display>

<http://ic16.mathigon.org/swarm/display>

<http://adobe.ly/2a5FWK6>

<http://www.ericlondaits.com.ar/ic16/index.html>