

Markers: what for and how? Reflections

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> Waste Management Conference Phoenix, Arizona, 6 March 2017

ANDRA

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DISEF/SFP/17-0012

The French case





Lessons from the past

Tsunami warning stone, Japan

Phenician sarcophagi

Pyramids





Why and for What?

Markers can...

But they also might...

Warn of a potential danger

Raise curiosity

Not enough information

Alert of a danger

Inform

Raise safeguard issues

Too much information

Could they...



Point to more information?

Prevent from intrusion without referring to the existence of the repository? (e.g. esthetic value)





Why and what for?

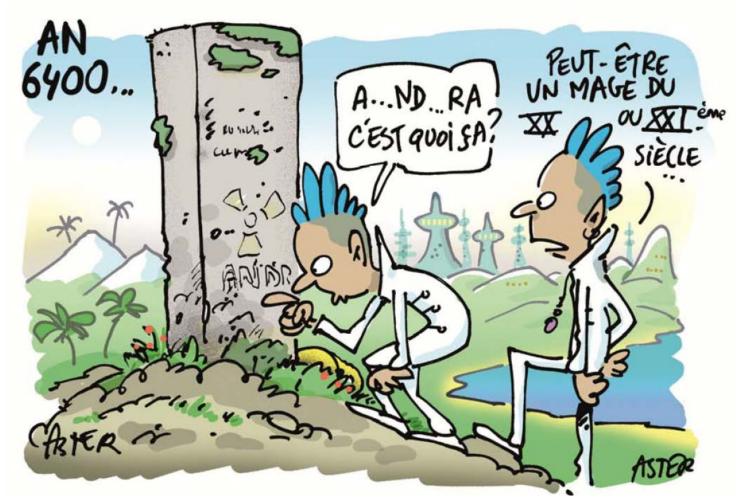
How?

DISEF/SFP/17-0012

The French case







Year 6400...

A...ND...RA What is that?

Maybe a magician of the 20th or 21st century...



The issue of language

Languages evolve and die

Rosetta stone?

You need to know very well at least one of the languages

Pictograms?

May be understood by people from different languages But are they universal?



How: features of a marking system

Pictograms are not always self-explanatory













How: features of a marking system

Pictograms are not always self-explanatory





Picture of falling man doe not depend on culture

Triangle sign of danger (CAUTION!) is purely conventional, though widespread



Why and what for?

How?

The French case

The French case



Markers are not required by the regulator, nor part of the « Reference Solution »

But they are considered in the Memory Program, through:

Art

Archeology of landscape Materials



The French case: artistic research on marking

Marker project for the Manche repository

Cécile Massart





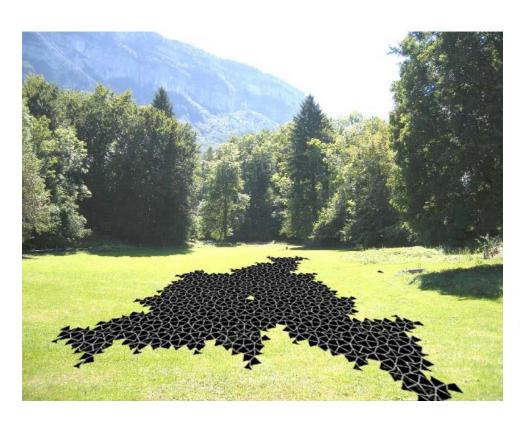
Artisting research on marking

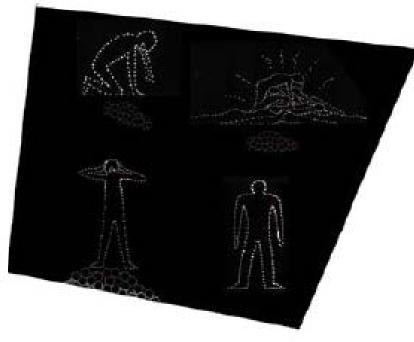
Prométhée oublié

(forgotten Promethea)

Alexis Pandelé

Andra artistic contest Art et Mémoire 2015





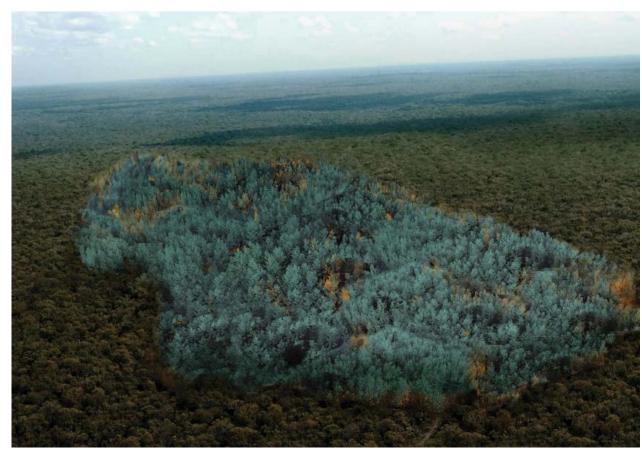
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Artisting research on marking

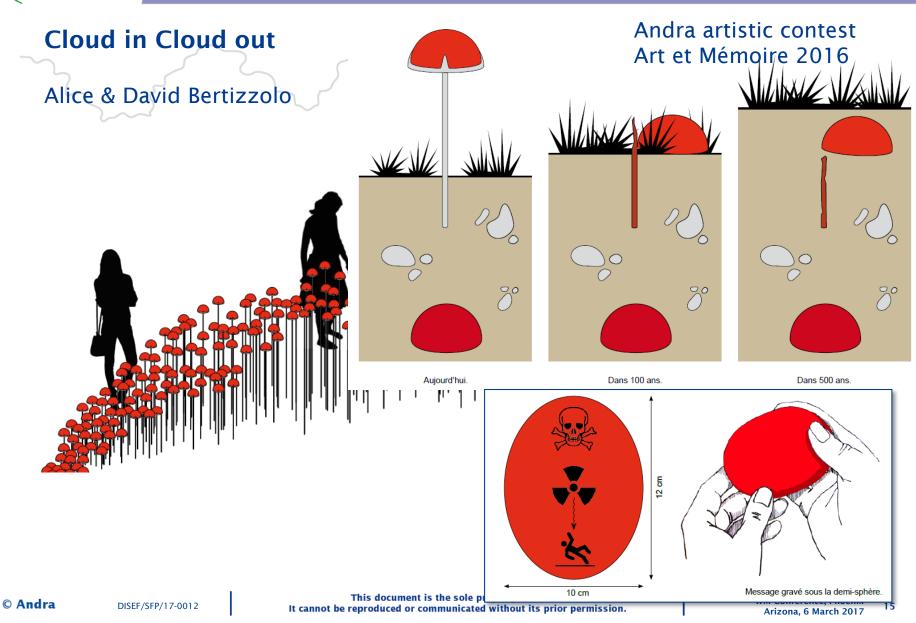
La Zone Bleue (The Blue Zone)

Stefane Perraud -Aram Kebabdjian Andra artistic contest Art et Mémoire 2015





Artisting research on marking





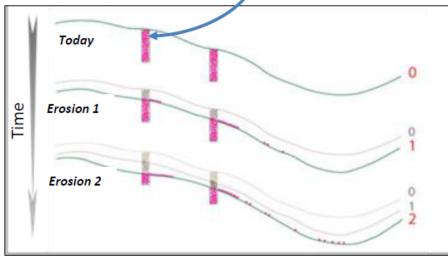
Landscape archeology

Small markers for correct interpretation of the landscape D.Harmand and J. Brulhet, Constructing Memory Conference



1) The material which could be used to mark the Cigeo site

- Small engraved pieces
- Included in some geologically exotic material (for example: siliceous sand / limestone plateau)

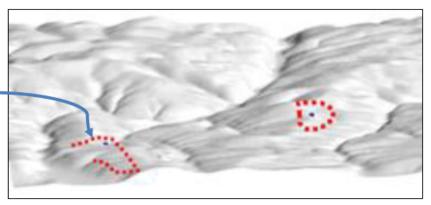


2) The marks design

The material could be included in some few meters long drill holes,

This concept allows pieces distribution at surface over a long time period

despite natural erosion of the site



3) Spatial distribution of the marks in the landscape Markers could be distributed around the main Cigeo surface facilities





Materials research using clay (argilite) from the host rock

ENSCI-ENSIL Limoges



Geoplymere

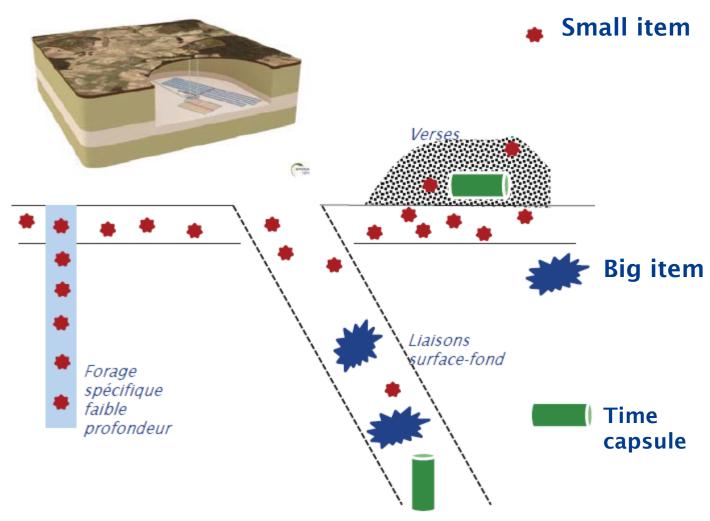
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Glass



Landscape archeology and markers





Thank you for your attention!