

COSCH panel ISPRS Comm V
A user perspective on the COSCH KR
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Background:

Interest in 3D arising out of PhD

Immediately began to look at the possibility of integrating spatial data

Standards – agreed standard for documenting CH

Standards – Textual Scholarship

Standards – ‘Customisation of TEI Text encoding initiative: EpiDoc’

Began to look for similar in CH domain: CIDOC-CRM but nothing that integrated technology into the discussion - conceptual relationship model now ISO standard 10 years in the making

Participants:

Engineers

Colour scientists

Physicists

Spatial

Spectral

3D

2D

Hyper-spectral imaging

Infra-red

Almost infinite possible sub-domains

Participants:

Archaeologists

Curators

Historians

Art historians

Restorers

Epigraphers

Geographers

Linguists

Industry

Gaming

Education

Museum specialists

Another infinite list ...



Knowledge Representation:

Deep awareness of the resonance and impact of CH on the
community

Culture
Heritage

Memory
Identity
Language
(their) Narrative

Accuracy

Measurement

Documentation

Remediation / Dissemination

When technology meets custom:

Fifth Century message stick – organic,
decayed in Irish climate

Met new technology – writing on stone,
used their own writing system with this new
technology – not writing on the flat surface,
but on the edge – not writing from left to
right, but from the bottom up to the top

It survives – because it adapted to the best
technology available, to mark a boundary,
to remember a name



Safari File Edit View History Bookmarks Window Help

CISP - Celtic Inscribed Stones Project

http://www.ucl.ac.uk/archaeology/cisp/database/ UCL CISP

AMORE/1/1

AMORE/1/1

Readings

Macalister, R.A.S. (1907): LUGUDECCA
Expansion: LUGUDECCA
Translation: *Of Dolativix (P)*
[Macalister/1907](#)

Macalister, R.A.S. (1945): LUGUDECCA
Expansion: LUGUDECCA
[Macalister/1945](#)
[Ziegler/1994](#) 27

Notes

Orientation: vertical up along down
Position: n/a ; arris ; n/a ; undecorated
Incision: pocked
 Macalister/1945, 258, notes
 Macalister adds, 'This difference of technique, indicating a difference of origin, is sufficient to disprove Rev. Dr Henebry's (intrinsically improbable) attempt to connect the two inscriptions by translating *dolati Biga isgob* 'disciple (*dalta*) of Bishop Bigos' (*Ivernian* 7 [1915]: 123)'.

Image from Macalister 1945 (CIIC vol. 1)

the 3rd line as a 2nd inscription. DOLATI BIGA-ISGOB[--

up-down), pocked; the second, on a third angle, chiselled'. In a footnote

Home ----- Indexes ----- Maps Site Next Stone Previous Stone Search Email CISP

Inscription

Description

3D View

Video

Map

Transcription

LUGUDECCAS MAQI/.. [MU]/COI NETA-SEGAMONAS/ DOLATI
BIGAISGOB...

Translation

'of Luguid son of .. the tribe of Nad-Segamon ?'

Commentary

The personal name LUGUDECCAS is a compound of LUG and DECAS (**dek-* 'best of/through Lug (uel sim.)' (McCone 1996, 119) or possibly with *E* reflecting lowered **i*, **dik* 'pointing out Lug (uel sim.)' (Stifter 2011, 24). This name displays a pre-apocope -as ending (i.e. probably pre 6th century, cf. Later spellings in 286. Kilgrovan, Waterford (LUGUDECA), 4 Kilmannin, Mayo (LUGUDEEC) and 108. Kilcullen South, Cork (LUGUDUC for -DEC?) [-DECAS > -DECA > -DEC] (McManus 1991, 103, 116). In this occurrence of the name we also have an example of 'apparently meaningless' doubling of consonants with CC rather than a single C elsewhere (McManus 1991, 124-5).

The unidentified tribal or sept name NETA-SEGAMONAS (cf. nearby 300. Island, Waterford and possibly also 292. Kilgrovan, Waterford) consists of the element *Nad-* 'sister's son, champion' and a personal name Segamon (McManus 1991, 109-10, 112). One theory is that this may be the Gaulish name Segomo (McManus 1991, 179 n. 46.)



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Throughout Europe many users, in a variety of domains have a similar problem:

They have a research question

They have an artifact to document

Where do they go to solve it?

COSCH KR proposes just such a solution - not everyone is in a university or in a national museum, or similarly resourced

COSCH proposes to harness the combined expertise of a range of experts modeling their knowledge in a systematic way

Formative

Generative

Integrates User understanding and requirements

Taking excellence in the state-of-the-art as a standard it integrates key aspects of project decisions on a basic level

Time

Finances

Access

Human Resources

Unlike databases of old, siloed / walled gardens

Sometimes device dependent / at times software dependent

The COSCH KR is a semantic solution that resists that closure

Topics covered by COSCH :

- **Acquisition:** Combination and exact matching of 3D and spectral information, development of multi-sensor systems, methods for high-precision surface measurements of large objects without use of reference points or calibration patterns.
- **Processing** (deblurring, enhancing, etc.): For a precise visualization of CH objects, data (images and 3D) should be of high quality. This process needs establishing physical (spatial and spectral) models of the entire acquisition chain (light propagation, light integration, etc.).
- **Analysis** (feature extraction, fusion, etc.) is the process by which some features (measures, thematic maps, key points, pattern, regions, etc.) are extracted from images or 3D data with analysis algorithms. The challenge here is the integration and adaptation of such analyses within complex data (e.g. 3D+spectral).
- **Standardized characterization** (optical, spatial description): Digital devices are involved in all stages of the acquisition (display, LCD-Projector, cameras, etc). Their correct calibration ,characterization and management provide faithful and repeatable measurements.
- **Definition of knowledge base related to object characterization:** All the stages (acquisition, analysis, etc.) use and generate knowledge that needs to be managed in order to support objects description and characterization.

- **Visualisation and reproduction** (incl. object and colour rendering, Human-Computer interaction): The spectral data are not readily presented on standard monitors. Usually a dimensionality reduction is required. But the latter should balance informative content and Human Visual System properties while rendering these data. These processes should be integrated within the human - machine interaction.
- **Data content:** Improved use as such will add value to the content of acquired data and the potential for their further utilisation. Especially an integration of different data sources should considerably extend the content and value of the data possibly to their full potential.
- **Data storage, transmission and retrieval** (incl. compression and annotation): Optical instruments generate a large amount of data that require appropriate encoding and compression techniques. Furthermore, shared databases should be created and the access to the objects must be facilitated by some annotations and additional semantic information.
- **Quality evaluation** (relevant to all previous steps): The quality of the process should be evaluated and validated by means of protocols and metrics (objective and subjective). This needs to be defined according to the goal of the process, the subsequent stages and user expectations.
- **Dissemination** (dependent on end-users) is the ultimate goal. How to make the acquired data available and in what form? This obviously depends on the nature of the object, the dissemination format (e.g. print, display, database) and on the needs of the end-user (scientist, researcher, curator, industrial, arbitrary user, etc.).

Thank you for your attention.

Go raibh maith agat.

Merci beaucoup.

Grazie.