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Exploration of copyright issues pertaining to derived geospatial data

provision of end-use cases to the GRADE project

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Introduction

- GRADE is charged with scoping geospatial repositories
- includes technical, rights and interoperability issues
- as part of the Digital Rights Management work unit, initial focus has been on working *from* specific case studies (use-cases)
- Three main themes:
  - use of geospatial data
  - example use-case
  - possible future developments

Geospatial Data

Geospatial Drivers

- *"Everything happens somewhere"*
- **PUSH:**
  - academic disciplines are realising the relevance of location and therefore its' application to their subject
  - geospatial data is rapidly becoming endemic to all areas of study
- **PULL:**
  - UK is probably the most mapped country on the planet
  - vast array of terrestrial and spaceborne survey data available. Much of it free for non-commercial use

Pressure to Produce

- Over 60% of university research in the UK is funded by the government (RCUK, 2005)
- the government (and anyone else) has to subsequently pay journals in order to read the results
- The Research Councils will require, from **this year** (RCUK, 2005), all findings from grant holders to be deposited in an institutional repository
- A similar move was announced by the National Institutes of Health (USA)

Pressure to Produce

- The requirement to deposit (geo)spatial data is implied by the RCUK statement
- Indeed NERC *already require* the deposition of output data sets from funded research projects

GRADE Use-cases

- It is against this backdrop that GRADE (JISC) is exploring the interplay of technical, digital management rights and interoperability issues
- Initial focus is upon the provision of “use-cases” (case studies)
- These provide a basis from which specific examples can be generalised
- The Journal of Maps (JoM) publishes geospatial data (maps) and has experience in issues pertaining to third party copyright

Journal of Maps

- Established October 2003 in response to a perceived decline in the publication of research based maps
- In part due to the stereotypical “B&W A4” journal
- Maps don’t fit this mould because:
  - they are often large
  - they are often colour
- JoM is naturally aware, and has many examples, of the use of *original* and *derived* geospatial data.

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Method

- Compilation of 11 “use-cases” detailing the use of original and derived data in research projects
- Based upon a template that records:
  - title, area
  - actors: primary (researchers), secondary (end-user)
  - stakeholders: creator, distributor, grant body
  - datasets
  - output data
  - descriptives: context, processing
- Following section provides an example

Use-Case Example

Monitoring Coastal Retreat 1

- Post-graduate researcher running a project on historical coastal retreat along Sussex coast
- Primary end-uses includes:
  - dissemination to public
  - input in to environment management (public policy)
- Stakeholders include:
  - Ordnance Survey (creator)
  - University of Sussex (educational institution)
  - European Union Regional Development Fund (grant body)
  - Landmark (creator)

Monitoring Coastal Retreat 2

- Methodology:
  - map historical coastal position (1870s)
  - map modern coastal position (2001)
  - calculate rates of erosion over 35km for 50m sections
- Primary data sets:
  - OS First Edition 6” Digital Maps (scanned, out-of copyright)
  - Digital Orthophoto (EA; public domain)

Monitoring Coastal Retreat 3

- Secondary data sets:
  - OS Landline (Crown Copyright)
  - GPS surveys (original)
  - Ground Survey (© Lewes DC)

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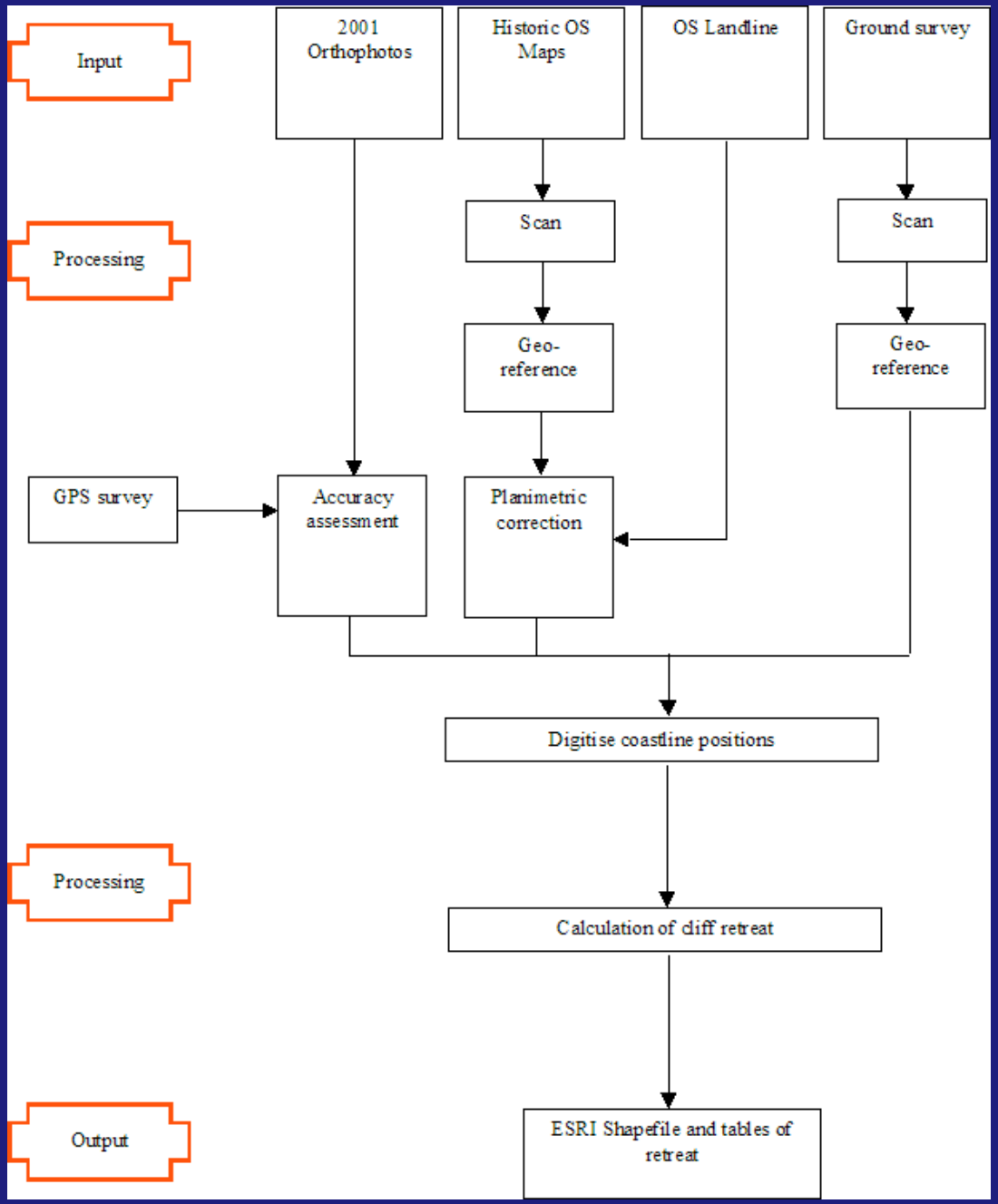

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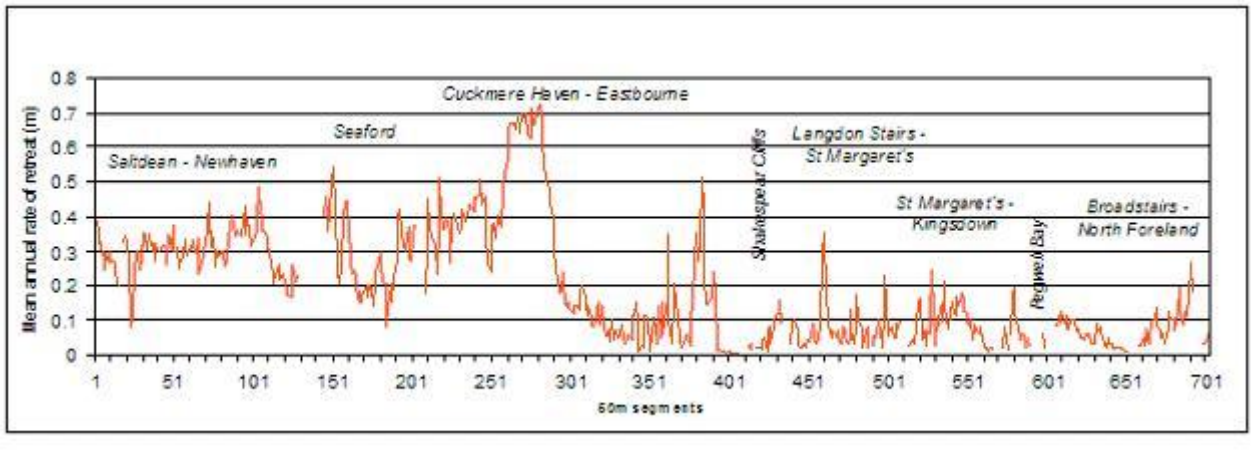
Monitoring Coastal Retreat 4

- Outputs:
  - modern and historical coastal positions
  - calculation of coastal retreat



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Summary

- Primary data sets are either out-of-copyright or public domain
- Minor positional corrections are applied from the OS data
- The **entire** output data set retains OS copyright
- Results:
  - Publication is restricted
  - Distribution is not allowed
  - The data set must be destroyed when the license expires

The future?

Copyright: Third Party Data

- Predominant supplier of geospatial data in the UK is the OS
- Within HE institutions this is usually supplied by EDINA
- **All** electronic, internet facing, maps come with very stringent restrictions based upon:
  - maximum size of individual image
  - maximum ground area
- This varies by product but generally means that any map **larger** than A5 is unpublishable
- And because the data is copyright it cannot re-distributed

Copyright: OS Data

- If you **derive** any of your data from an OS data source then it **inherits** the same copyright restrictions
- The **derived** data set therefore cannot be redistributed

Key Issues

- Two main key issues that **need** addressing:
  - Non-commercial licensing
  - Copyright Inheritance

Non-commercial Licenses

- Creative Commons is **one** example of a non-commercial license
- Allows the originator to retain copyright whilst specifying how material may be used
- “In-between” licensing
- May **not** provide the exact “share-alike” license an organisation needs

Sampling

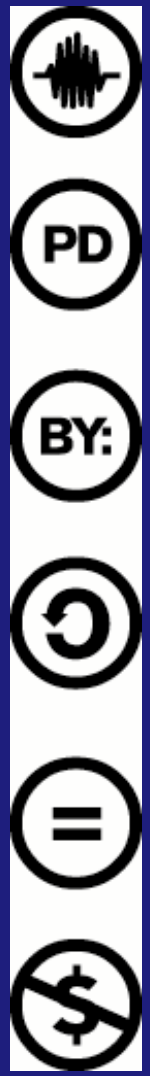
Public Domain

By Attribution

Share Alike

No Derivatives

Non-commercial



Copyright Inheritance

- Other data suppliers (e.g. Intermap) have less restrictive inheritance licenses
- Based around the idea of “thematic data”
- Criteria:
  - Can a data set be reverse-engineered?
- Derived data can also be categorised as:
  - Quantitative: an empirical process derives a new data set from an old one (e.g. buffering a river in a GIS)
  - Qualitative: visual interpretation/subjective assessment where “value” is added (e.g. mapping glacial landforms)
- Should this alter the interpretation/restrictions of derived data?
- These issues **force** non-OS solutions

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Conclusions

- The increased availability of digital data, pan-discipline, has brought copyright issues to the fore
- copyright inheritance and non-commercial licensing are key to DRM
- the OS is the most influential data supplier in the UK, however there are clearly other important organisations that operate different licenses (e.g. Infoterra&Glasgow City Council)
- maps based upon OS data are effectively **not publishable** in **any** journal
- data derived from OS data are effectively **not lodgable** in **any** archive