

# AutoCAD, the “Open” Design Alliance and preservation

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# What's the AutoCAD problem?

- Most common CAD application (.dwg)
  - More ubiquitous in some sectors than Windows
- Despite being developed for nearly 30 years
  - File format keeps changing
  - New versions drop support for older dwg formats
- Lack of open source libraries
- Lack of specification
- Format should be real de jure open standard

# Common, yet divided

- Most companies in construction use it
- But construction is a tall market
- The rich (engineering consultants and architects) don't see preservation or price as much of a problem
- Everyone else has to upgrade

# After 30 years, dwg in flux?

After 30 years of development surely AutoDesk would have a really good grasp of what might need to be stored in a CAD file...

# After 30 years, dwg in flux?

Incompetence or  
the worst kind of protectionist behaviour?

# Lack of open source libraries

Makes it hard to build a sustainable workflow!

# Lack of specification

So we have to **trust** AutoCAD will open the files in the future?

# Making CAD standard

- One of the last bastions
- Needs multi-sector backing
- Needs multi-vendor input
- Needs a standards expert involved
- Needs to happen!

# OA's CAD problem

- The very bottom of the pit sector
- The people who could enforce a standard don't seem aware of the problem
- CAD as an application not suited to archaeology (whatever archaeologists say!)
- Changing workflows requires automated CAD ingest
  - Not for preservation...
  - ODA could help?

# Down in the mud...

- Contract archaeology right at the bottom
- Take example road project
  - Highways Agency – Local authority – civil engineering consultancy – construction Plc – archaeological consultants – archaeologists
- And archaeologists first on site...

# The (non) enforcers

- Highways Agency?
- Local Authorities?
- Whose money is it anyway?
- Does anybody up there know this is a problem?
- Hello?

# The (non) enforcers

HELLOOOO?

ello....

loo...

oo...

# CAD and archaeology

- They give us dwg (version unknown)
- And want dwg back
- So we use AutoCAD
  - Designed for, well, designing things
  - Things with like regular shapes, known curves, to be built with consistently shaped stuff
  - Stone age up to 200 years ago is not how things were built
  - And archaeologists want to analyse and assess, not draw lines and dots

# Replacing CAD

- The data is spatial
- So store it in a spatial DBMS (PostGIS, Spatialite)
- Link to other data
- And work with it in GIS (web, gvSIG, QGIS)
- Input, access and modify on mobile devices
- Present to the web for instant access
- But...

# CAD in, CAD out

- Is what the client wants (or thinks they do!)
- So need to read and write CAD
  - Many cases could output DXF layer, but input problem remains
- Hmmmm

# ODA, ingest and preservation

- Open Design Alliance (formerly Open DWG Alliance...)
- Create libraries to build DWG read-write applications around
- Maintain full version compatibility
  - 3-6 month delay on new dwg versions
- Libraries not freely available
  - Although relatively small cost to use internally

# ODA a solution, maybe

- Yet, still...

We Need a

**STANDARD**