Using GDAL for Helicopter Safety

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Health Atlas Ireland AeroMedical

- In 2012, we launched a new Web based GIS for use by the National Ambulance Service.
- The software helps to direct and manage AeroMedical missions.
- System was developed with the help of multiple agencies and has won numerous awards to date.
- It combines various Open Source tools and libraries such as OpenLayers, PostgreSQL, PostGIS, Proj4, Node.js and GDAL to help emergency services 24/7.
21st June 2012

- 20 kV line
- 220 V line
- Flight Path
- 20 kV transverse line
- 270 final position
- Gate
ESB Networks

- To prevent similar accidents in future, we requested data for the Irish Electrical Grid.
- Took 6 months of negotiation, but eventually delivered via DVD.
- Data was given in a CAD format (Bentley Microstation).
- Over 1.5GB of Information.
- Needed some method of converting to a more suitable GIS format.
GDAL to the Rescue

- Trial versions of the software would not allow export to SHP.
- Tried GDAL and ogr2ogr.
- After some work, the DGN v8 driver was able to make sense of the data.
- Managed to import everything into PostgreSQL.
Above and Below

- The CAD data contained both above and underground cables, ducts, poles and labels.
- The DGN format uses a series if levels and colours to denote different features.
- Using QGIS and printed maps from ESB Networks, we identified each feature in turn.
- Using SQL, we dropped all underground wires.
- This left us with linestrings for each cable.
High voltage Lines
75,825 Features
Medium/Low Voltage Lines
910,033 Features
More Information

- See our website www.openapp.ie and check out our Work.
- View my previous talk on the Air Ambulance Service here: https://youtu.be/eserHSIz0EA
- Contact us: info@openapp.ie or nigel@openapp.ie