Visual analytical approaches to evaluating uncertainty and bias in crowdsourced crisis information

Iain Dillingham, Jason Dykes, Jo Wood — giCentre City University London

To what degree are uncertainty and bias found in public collections of incident reports gathered during crisis events?

**Uncertainty** [1]
- Accuracy/error
- Precision
- Completeness
- Consistency
- Lineage
- Currency
- Subjectivity
- Interrelatedness
- Credibility

**Bias** [2]
- Systematic error

**Hypothesis 1**
There is systematic variation in the spatial accuracy of coordinate pairs in space and time.

Geocode location strings. Determine associated uncertainty. Compare to coordinate pairs.

**Hypothesis 2**
Coordinate pairs cluster around systematic points.

Density-based and distance-based point pattern analysis. Investigate spatial statistical analysis?

**Hypothesis 3**
There is systematic variation in the spatial precision of location strings in time.

Classify location strings by relative spatial precision. Explore scale dependencies?

References

Contact
iain@dillingham.me.uk
dillingham.me.uk

gicentre.org