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# Exploring Road Incident Data with Heat Maps

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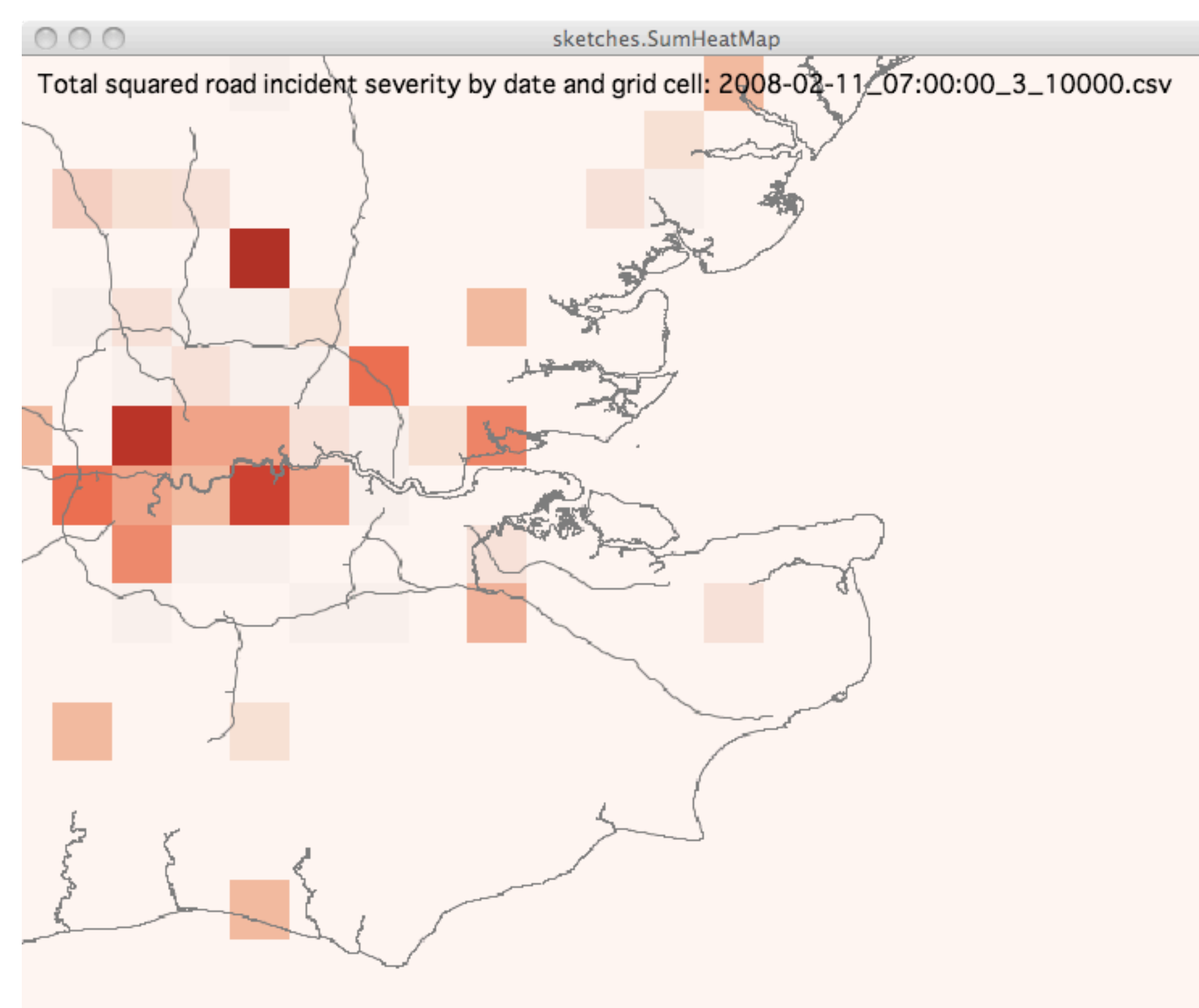
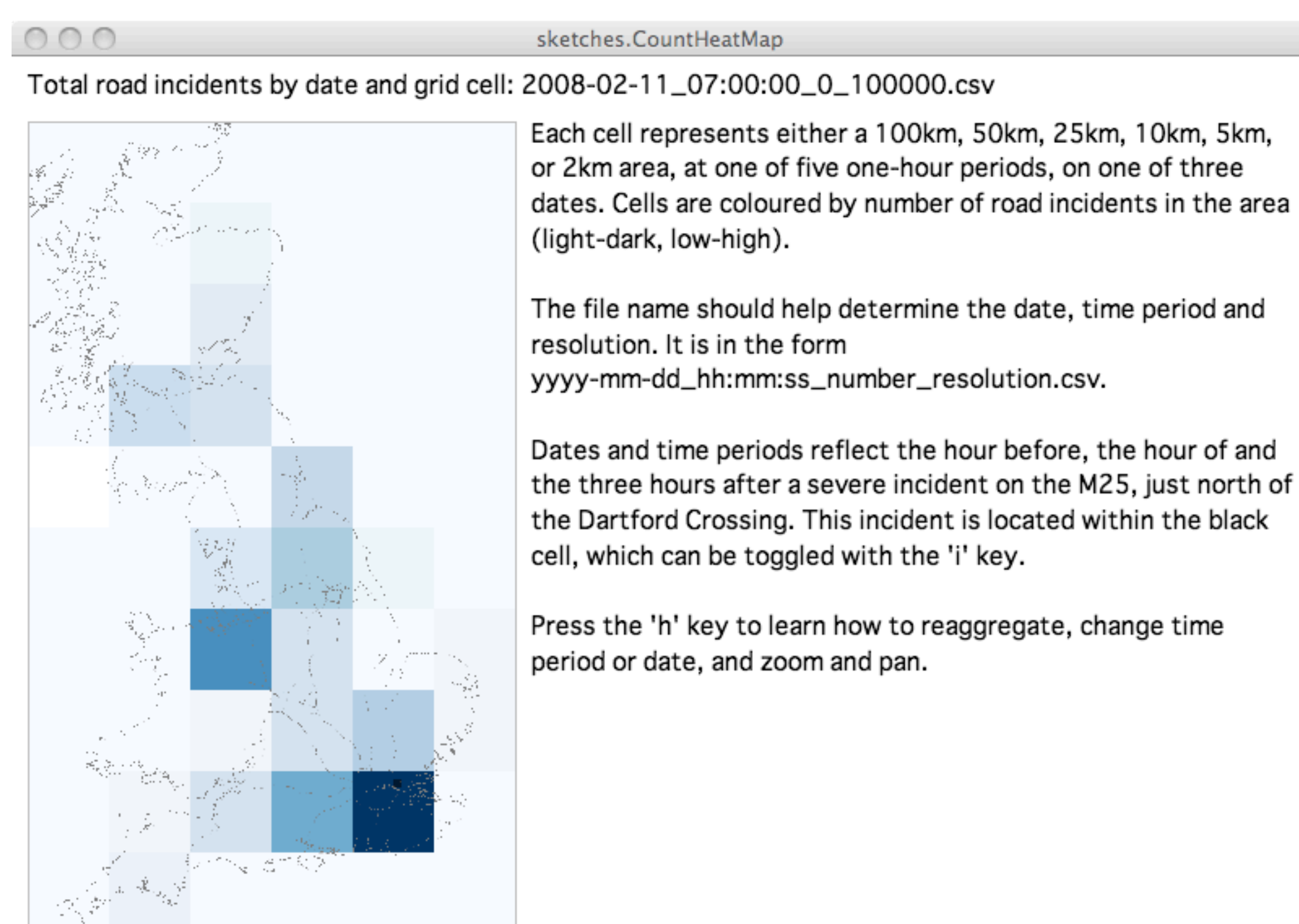
## 1) Road incident data

- 14.5 million records
- 2.5 million road incidents
- United Kingdom
- September 2002 to September 2009

## 2) Method and tools

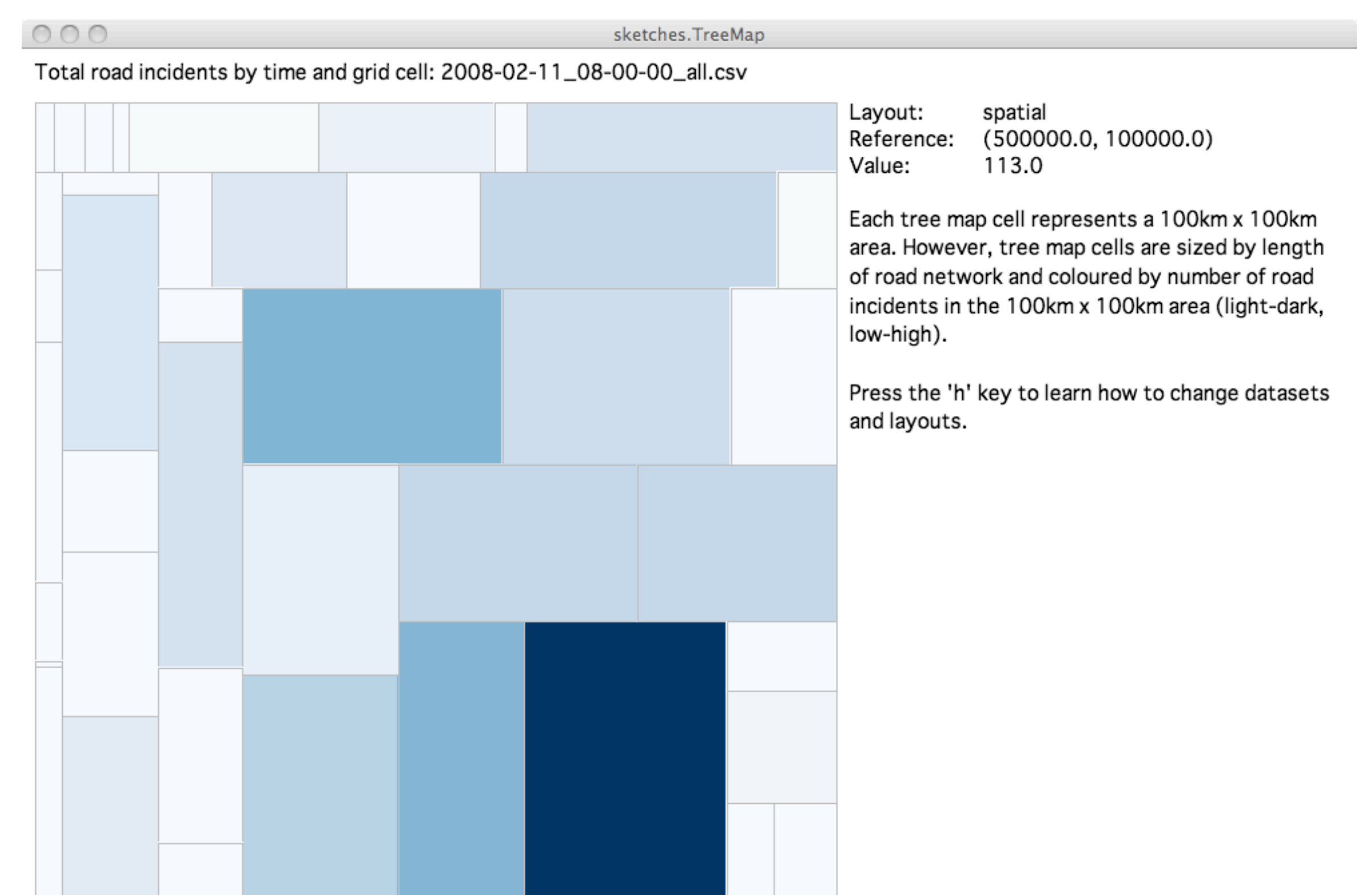
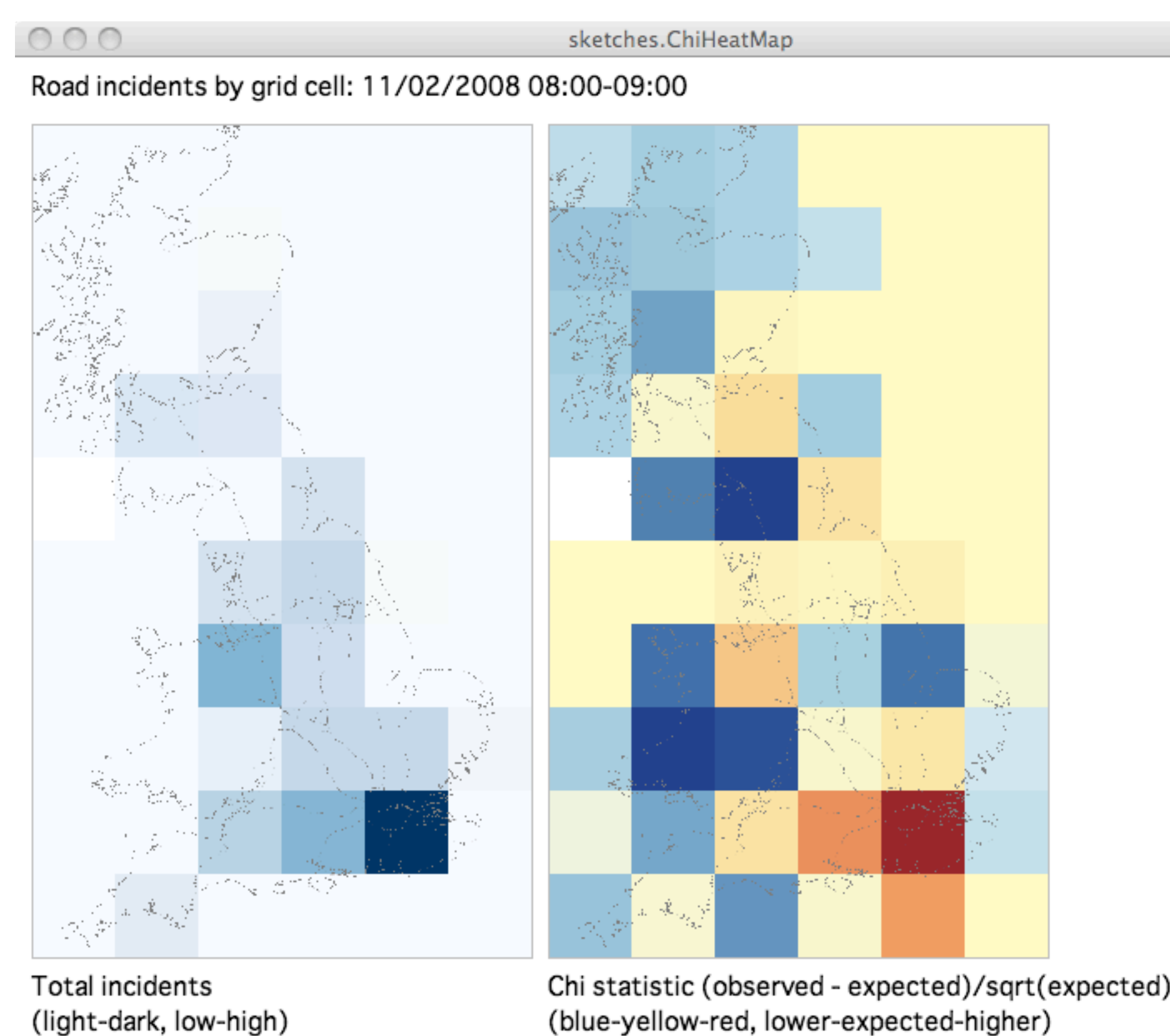
- Parse, filter and mine (Fry, 2007)
- UNIX command-line utilities
- GDAL/OGR geo-tools
- LandSerf GIS
- MySQL

## 3) Software



Interactive heat maps at multiple spatial and temporal resolutions enable the user to explore patterns before, during and after several severe road incidents (rated 5 on a 1 to 5 integer scale) at one London location.

Single spatial and temporal resolution heat maps demonstrate abstract, interactive spatial representations and alternative values.



## 4) Evaluation

The software prototypes follow cartographic practice. Based on system provision, interaction is reasonably powerful.

Presentation and discussion of results with domain experts highlighted further requirements.

## 5) Conclusions and future work

The exploration process detected:

- anomalies in the data
- patterns for further investigation

The software should be extended to support:

- existing interaction and task typologies
- the tasks performed by domain experts



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