Global Perspective on Privacy and Geodata
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DKC
Making the complex simple.
Context

Data Breaches
Hacking
Spying/ “microwaving”
Terrorism
Corporate Espionage
Misuse/ Greed
The untrained
The uncaring
Big Data
Blockchain
Information Sharing
IOT etc
Data protection laws of the world

GDPR after one year

[Diagram showing various statistics related to GDPR compliance, such as cases received, organizations with documented registered DPOs, individual complaints, data breach notifications, cross-border cases, and fines.]

GDPR Impacts

• Paperwork: Evidencing compliance - training/roll-out etc
• Process & Role
  – Data Controller
  – Data Processors
  – DPO
• Changes the way business with data is done
  – Privacy by Design (PbD) - anonymisation
  – Data Protection Impact Assessments (DPIA)
• Getting up to speed with tech and consumer demand
  – Data portability
  – “right to be forgotten”
  – Access rights – quicker, better, NOW!
Data subject identifiable by:
1. Individual name
2. Phone number
3. Email address
4. Unique number e.g. employee/customer number

However, location data enables the “identification and singling out of an individual and will often be calculable”

“So even if you never intend to link location data that you are collecting for a particular person it will likely amount to personal data despite not naming the individual in question”

If linked location data reveals a persons movement it may be enough to identify the home address or place of work

https://www.dataprotection.ie/docs/Guidance-Note-for-Data-Controllers-on-Location-data/1587.htm
Location Data as Personal Data (2)

We need to look at both the range and context of the data collected OR available:

• GPS, WiFi, power signal data, map co-ordinates, townland name, IP address or any other description or metadata that may reveal location

• “In some cases even a broad indication of location may be enough to accurately identify a person”
## Anonymisation

<table>
<thead>
<tr>
<th>Go-card no.</th>
<th>Passenger DoB</th>
<th>Start point</th>
<th>End point</th>
<th>Journey time</th>
</tr>
</thead>
<tbody>
<tr>
<td>WT98765G</td>
<td>01/09/1973</td>
<td>Brooks End</td>
<td>Tree Street</td>
<td>17m 45s</td>
</tr>
<tr>
<td>WT45678B</td>
<td>18/09/1933</td>
<td>Brooks End</td>
<td>Tree Street</td>
<td>15m 05s</td>
</tr>
</tbody>
</table>

and this:

<table>
<thead>
<tr>
<th>Hashed* passenger ref. no.</th>
<th>Age band</th>
<th>Start Point</th>
<th>End Point</th>
<th>Journey time</th>
</tr>
</thead>
<tbody>
<tr>
<td>14793X</td>
<td>35 - 45</td>
<td>Brooks End</td>
<td>Tree Street</td>
<td>18m</td>
</tr>
<tr>
<td>23955P...</td>
<td>75 – 80</td>
<td>Brooks End</td>
<td>Tree Street</td>
<td>15m</td>
</tr>
</tbody>
</table>

* a keyed cryptographic hash function such as SHA356
But

What about other data sets that are available does this change our view?

• Let us assume that the starting point of Brooks Ends no longer services a large population but only a population of say 500.

• Now for example if we cross reference with the population statistics and find that there is only one person that is in the age bracket ‘75-80’ we are starting to reveal personal data about this person’s frequency, destination and duration of their journeys.

• Worth re-emphasising the tenet within GDPR, of data minimisation – only the minimum amount of data should only ever be collected, used and published.

• In the UK, the High Court ruled that the risk of identification must be greater than remote for anonymised data not to be personal data.
Anonymising mapping data

- Mask Geocoding
- Mask Topology
- Mask relations
- Remove Spatial Relations

100% Test Utilization
0% Production data
Level of masking
100% Anonymized data

- External integration test
- Internal integration test
- Functional test
- Non-functional test
Guidelines for public administrations on location privacy

There is a growing global recognition of the importance of protecting personal privacy information.

Policy makers across various jurisdictions worldwide are taking legislative actions to protect citizens’ privacy rights, and regulate the use of personal information.
Countries Surveyed with ‘Current’ Regulations on Data Privacy

- **USA Regulations:** The Geospatial Act 2018; The Privacy Act of 1974
- **Mexico Regulations:** General Law of Protection of Personal Data in Possession of Obligated Subjects; Federal Law of Protection of Personal Data in Possession of Individuals (Private Sector)
- **Brazil Regulations:** Informatic rights law. General of Data protection of Brazil
- **Europe Regulations:** General Data Protection Regulation
- **Australia Regulations:** Privacy Act 1988; Privacy Amendment (Enhancing Protection) Act 2012; Privacy Regulation 2013; Privacy Amendment (Notifiable Data Breaches) Act 2017; Australian Privacy Principles Guidelines (July 2019)
- **Malaysia Regulations:** Personal Data Protection Act (PDPA); Malaysia Geospatial Act (Proposed)
- **India Regulations:** Sections 43A & 72A of Information Technology Act 2000. The Personal Data Protection Bill, 2018
- **South Africa Regulations:** Electronic Communications and Transactions Act 2002; Protection of Personal Information Act, 2013
Impact of privacy regulation on the geospatial industry
Jurisdictions representing highest (dark blue) to lowest (light blue) level of alignment with GDPR
Quick comparison

DLA Piper

WGIC
WGIC Key Messages

• There is a growing global recognition of the importance of protecting personal privacy information.

• Protecting personal information is of the utmost importance to Members of the World Geospatial Industry Council (WGIC).

• WGIC Members are responsible for the collection, processing and distribution of geolocation data, not the personal information that may be associated with, or derived from, this data.
WGIC proposed next steps

Engage
Engage with the public sector and policy-makers.

Understand
Understand the direction of legislative work around data privacy and personal information protection.

Review
Review the impact on the geospatial industry at large and the WGIC membership in particular.
WGIC actions

WGIC decided to contract firm to extend survey

Three goals

1) Complete survey

2) Synthesis various how various legislation across varies countries could impact members

3) Provide some guidance to members moving forward about what the various legislation mean
Key components of survey

- **WGIC Location Data Privacy: Organisational Template**
  - Organisation details
  - Regulator context
  - Organisational checklist
  - Geospatial industry impact
  - Comments additional observations
## Sample of survey

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Included (Y/N)</th>
<th>Geo industry relevance (H/M/L)</th>
<th>Clarifications / Geo industry implications</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>Set up a governance structure for (location) data protection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.2</td>
<td>Set up a (location) data management programme</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.2.1</td>
<td>Develop personal data protection risk strategy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.2.2</td>
<td>Assess how data is used and linked with other data (how location data may become personal)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.2.3</td>
<td>Develop personal data protection policy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.2.4</td>
<td>Put in place Data Protection Agreements for organisations you provide with personal data or have access to personal data on your behalf</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.2.5</td>
<td>Ensure awareness raising and training in place for all staff</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Public Transport – Bus Tickets
Method 1 – Cash

Bus Ticket — Customer

Personal Data in Transport: exploring a framework for the future – Open Data Institute
Private and public organisations interlocked and inter-reliant in Data World

Public Transport – Bus Tickets
Method 2 – Credit

Personal Data in Transport: exploring a framework for the future – Open Data Institute
Possible next steps

- Eurogi does own survey
- Eurogi works with ELISE to do survey and produce more guidance and possible workshops
Questions?