# Getting Inspired

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# Content

**Location, Location – Glimpse of complexity – a dream of integration**

**INSPIRE – what is it?**

**Going Linear – Changes to DATEX II**
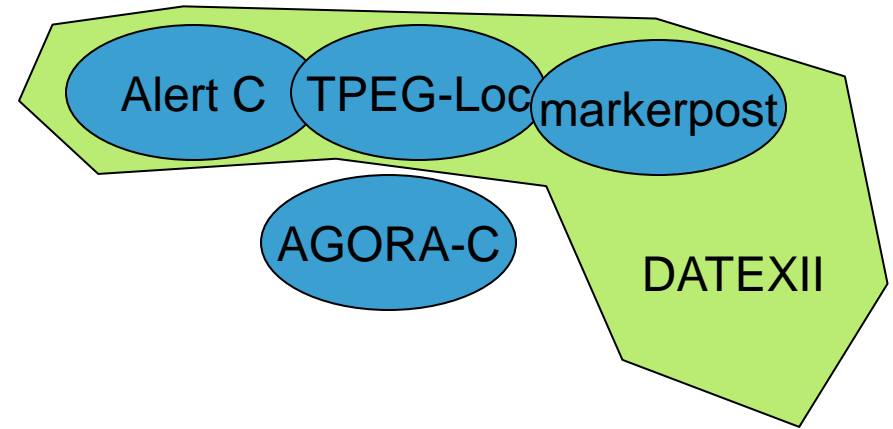
**How does this affect you?**

**We live in a joined up world**

**Your experience (and your brain) is very good at 'mashing up' different stream of information in different forms**

**Sadly our applications and standards (location referencing standards) just aren't that straightforward**

# A glimpse of complexity

## Location Referencing

- The ITS world knows of:
  - ALERT C referencing
  - TPEG referencing (includes subtypes)
  - AGORA C
  - References relative to marker post
- We also have:
  - Geographic data files (GDF) for describing networks
- But of course we are not alone…
  - In this session we see Open_LR, as well as public transport loc ref
  - And then there is the mapping/GIS (Geographic Information System) world
- Mapping/GIS
  - Approaches globally applicable and globally standardised
  - OGC (Open Geospatial Consortium) and ISO/TC211 (Geographic Information)
    - *Most have at least heard of GML (ISO 19136)*
- We have many different (application centric approaches) – interoperability is a real challenge

Alert C   TPEG-Loc   markerpost

AGORA-C

DATEXII

**INSPIRE is a major European initiative in the geo-spatial information domain. European Directive (2007/2/EC)**

- Establishes an Infrastructure for Spatial Information in the EU
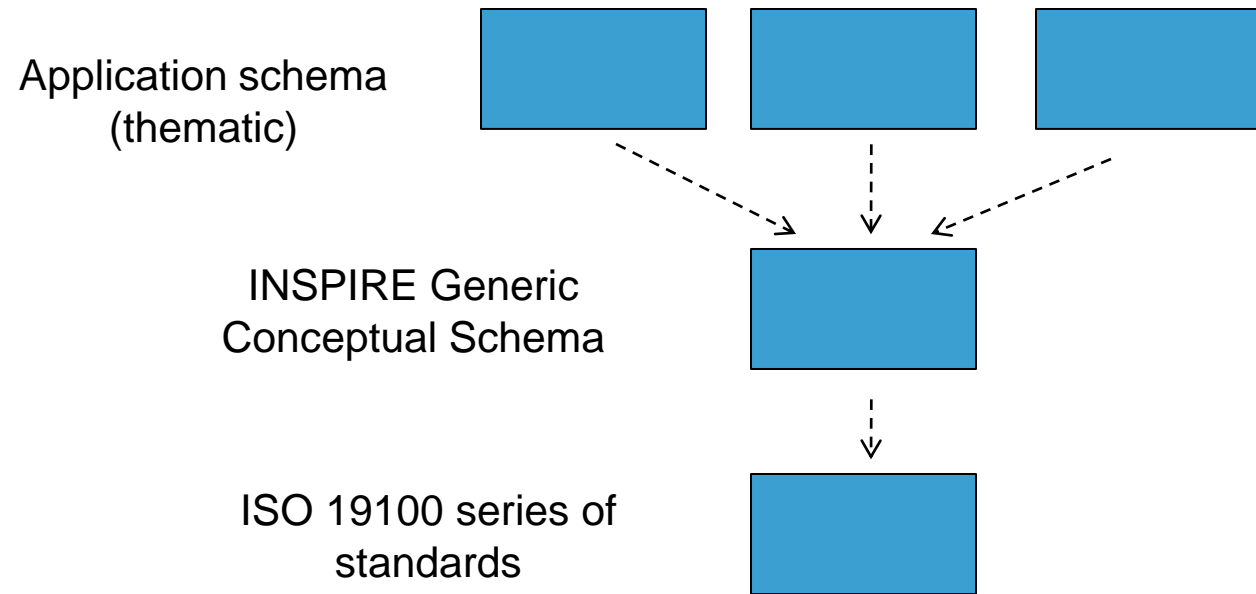- Environment focussed
- Came into force 15 May 2007

**The Association for Geographic Information (UK) wrote:**

- "Potentially all users and prospective users of spatial information will be affected….
- This will require much greater openness and, in many cases, more expertise than often currently available."

**Importantly for traffic management INSPIRE includes a theme called *Transport Networks***

## Consequences for public bodies:

- All public bodies will be required to create metadata

- Provide access to data they collect or create, in standard form

- INSPIRE specifications for network referencing and data definitions (Transport Networks) will be out of alignment with those in common practice within the many Highway Administration

- INSPIRE is centred on ISO 19100 series standards

Application schema
(thematic)

INSPIRE Generic
Conceptual Schema

ISO 19100 series of
standards

## INSPIRE – example (UK)

- INSPIRE is a key driver behind the UK Location Strategy
  - To maximise the value to the public, government, UK business and industry of geographic information. It will provide a consistent framework to assist national, regional and local initiatives and service delivery
  - All about "joined up government"
- Similar initiatives across all Member States
- Transposition into MS national law has the potential to affect every road administration
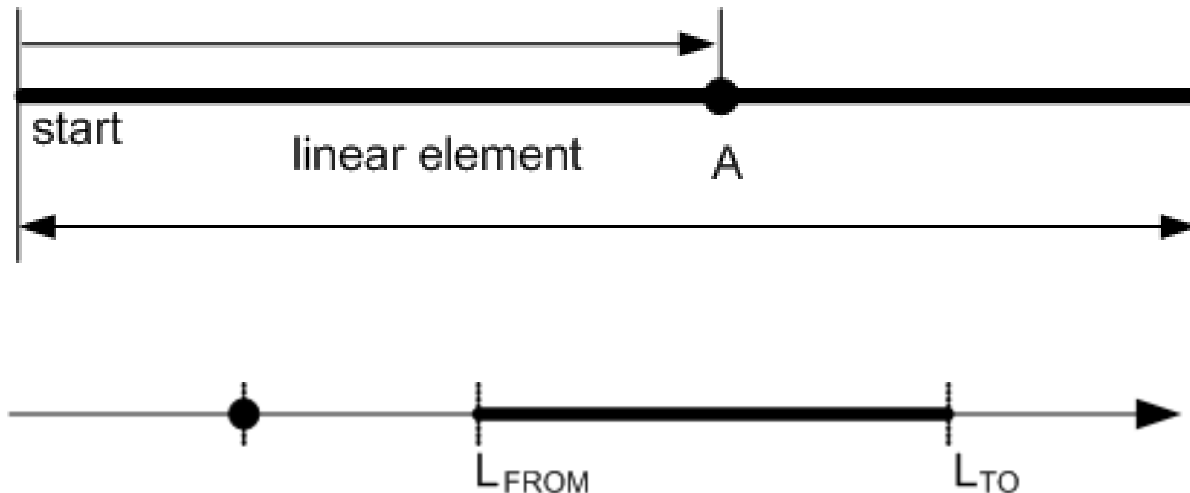
- For more information - http://inspire.jrc.ec.europa.eu/

## Relevance to ITS:

- INSPIRE explicitly mentioned in Clause 16 of the current text of the proposed ITS Directive
- **Sadly INSPIRE TN is effectively yet another new Standard**
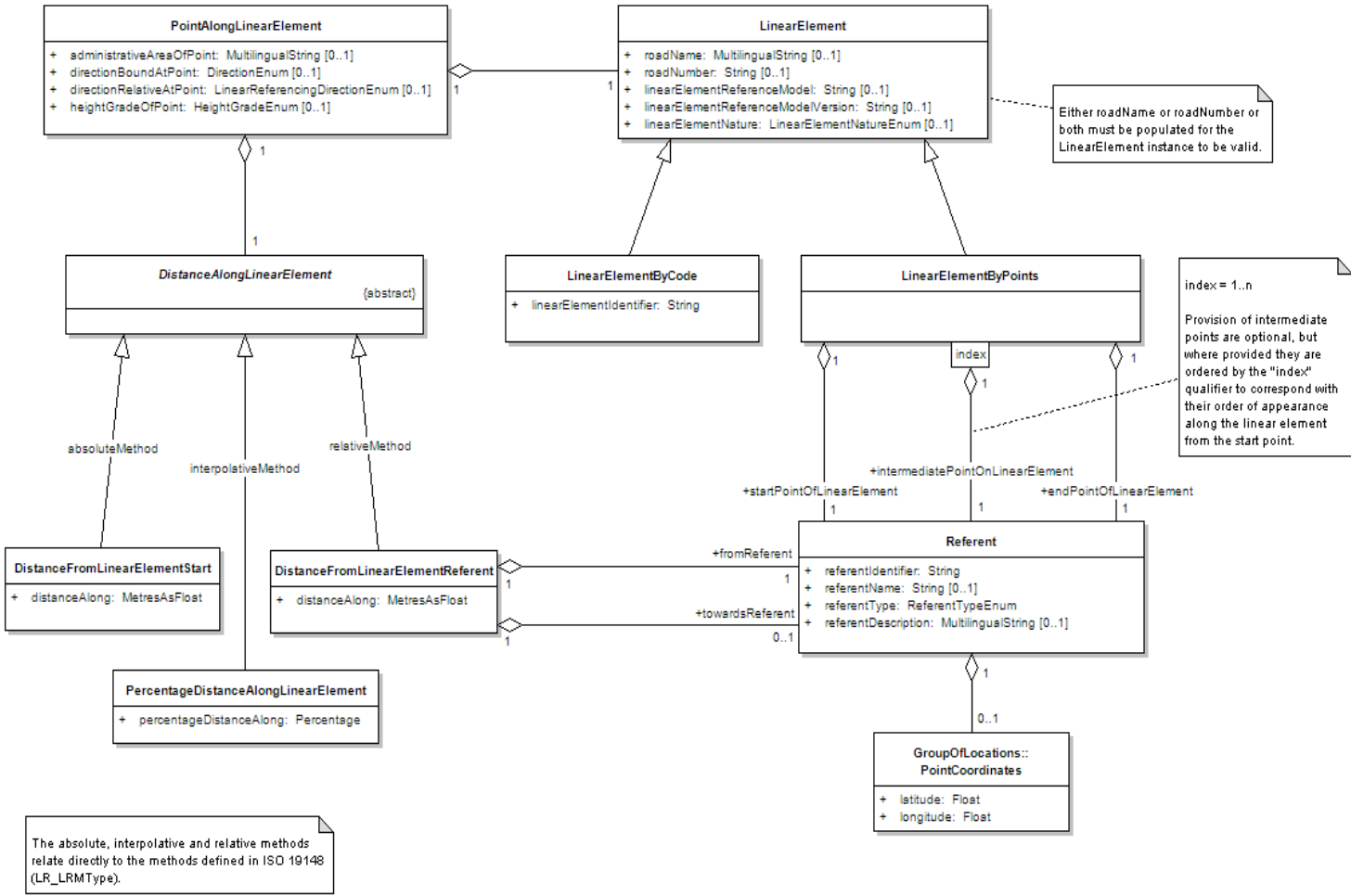
## INSPIRE uses ISO 191xx standards

- **INSPIRE specifications use ISO 19100 series standards' concepts, including linear referencing**

- **ISO recently standardised ISO 19148 Linear Referencing**



- **In the limit LR can operate without reference to any spatial co-ordinates**

## DATEX II has been extended to support Linear Referencing

- Provides a simplified version of the ISO19148 model

**Surprisingly large number of road administration use linear referencing for asset management purposes**

**In principle, they may all use/know of INSPIRE compliant networks, in the future**

- Will these be freely available to all?

**Strong argument for INSPIRE forming some part of road administrations core road network referencing models**

- The UK Highways Agency is developing a single core road network model for all corporate business function which uses many of these concepts

**This creates the ability to link into use of the (Transport) Road Network models being made available through INSPIRE**

- Unlike TPEG-Loc and AGORA-C which use map matching, this has to potential to reference to a common map
- But it has some rather strong commercial competitors

**INSPIRE as a EU Directive is an important consideration – likely that road administrations will have to have an INSPIRE data publication facility and an INSPIRE road network model**

**This uses ISO 191xx standards, including 19148 for Linear Referencing**

**A Linear Referencing capability has been included into DATEX**

**Sadly this does not reduce the complexity of location referencing solutions…**

**…Not yet part of an overall strategy (which of course is missing)**

# Thank You for Your Attention

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