

GIS Mobile Solutions, 3D and Real Time

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Nokia Location & Commerce

Location & Commerce

Created to deliver differentiated consumer location experiences



Enabling a **new range of opportunities** to distinguish customer products across **multiple screens**

Our Mission

Bridge the virtual world with the real world



The Content: creates a virtual index of the real world (reference data)

The Platform: makes the world computable

The Apps: provides a set of signature consumer experience

Bringing Together All The Building Blocks



Content —●



Platform —●



Apps
Across
Multiple
Screens



Location Intelligence Based on Smart Data Assets ...

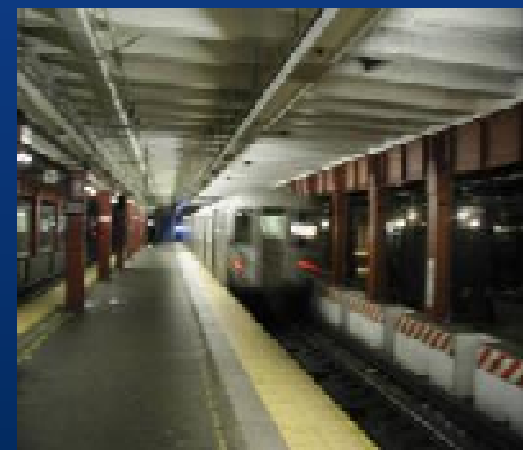
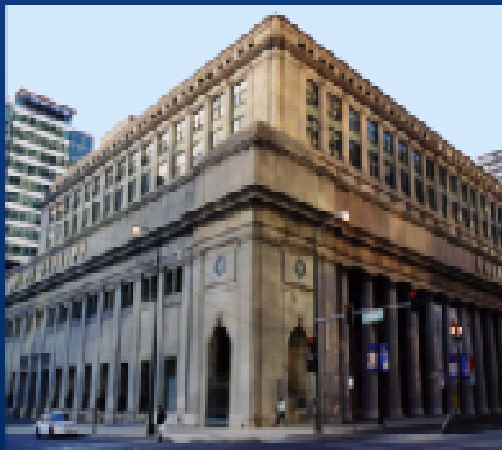
Reference
Data



Activity Data



Smart Data



High Quality Maps Creation & Update

Creation

Innovation in sensor technology, computing power and storage enables more data to be processed and modeled



Static flat maps:
25 years ago map creation started out by digitizing physical map sources



Computable Roads:
NAVTEQ started to collect precise road geometries with rich sets of attributes to make them computable



Click to edit Master text styles

Computable 3D Models:
We are creating fully interconnected and attributed 3D models, combining aerial and street level technologies



NAVTEQ True



GIS Solutions Require a Map Maintenance Program

HIGH

Real-time integration of crowd-sourced content

Crowd-Sourced



Community Updates



On-line tool consumers can use to suggest changes to the map

Map-owned Verification



Map organization verifies changes to the map

LOW

Level of Accuracy Required by Solution





The map needs the right attributes delivered with the right accuracy for the desired experience.



Verification of Map Attributes Is Essential

Supports inclusion of all roads

Improves accuracy of geometry

Capitalizes on local knowledge

Fills sourcing gaps

Building & maintaining real world index...

...Capturing activity data across geographies

196

Countries with maps

91

Countries with NAVTEQ maps

265

Cities with Natural Guidance

2.4M

map changes/day

28

countries with Traffic



12K

3D landmarks

75M

Places

1.8K

destination maps

120M

point addresses

38M

kilometers of roadway

500+

Public transport cities

45

NAVTEQ True cars deployed

+1B

search queries annually

11B

probe points processed monthly

120M

map tiles served daily

24M

route requests per month

+19M

geocoder requests daily

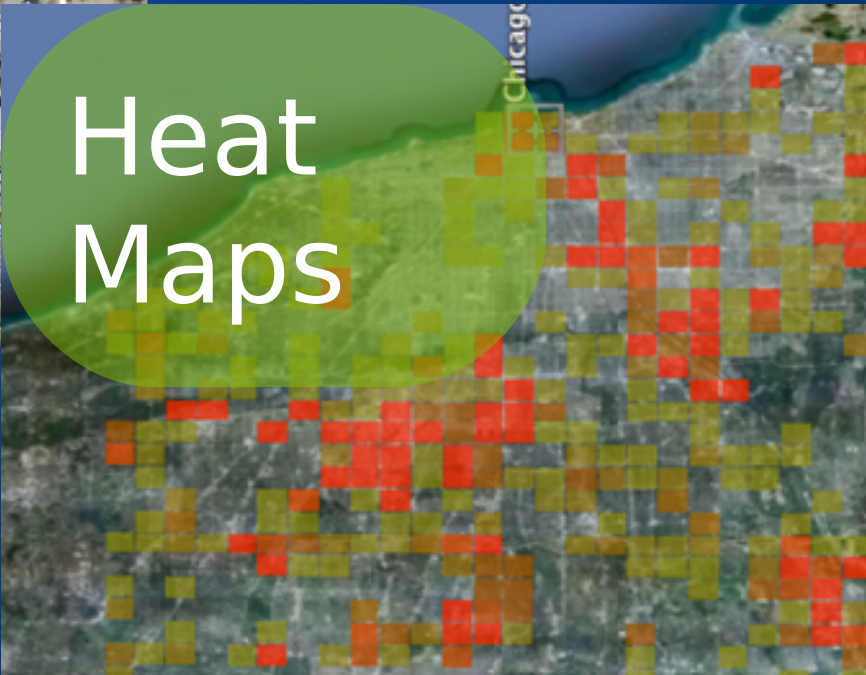
55M

positioning requests daily

Innovative Tools Can Provide a Foundation for a Map Maintenance Strategy



Probe
Data



Heat
Maps

3D Content

Computable 3D Content

3D City Models and Enhances 3D City Models



3D Landmarks



Motorway Junction Objects



Dynamic Content

Traffic

Brazil Flow

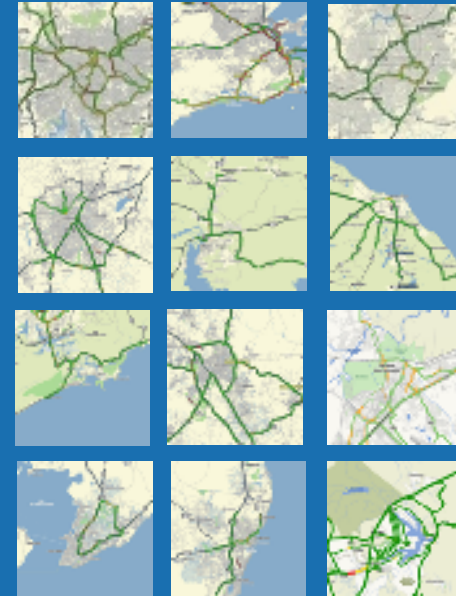
13 Markets

Brazil Incidents

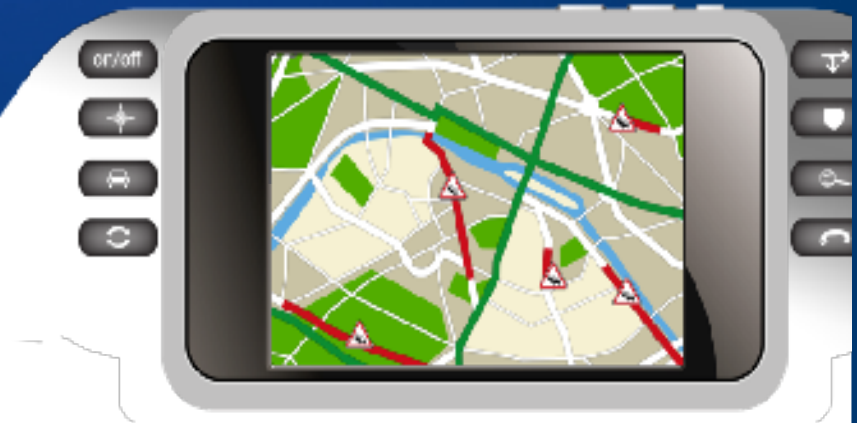
3 Markets

Brazil Traffic Patterns

Full Coverage



- Determine accurate ETA
- Display Congestion and Incidents on a map
- Ability to reroute around traffic congestion



Fuel Prices and Flight Status



Coverage

Brazil: Nationwide 100% of gas stations reported by ANP* and/or third party sources

Format

Dynamic XML feed

Accessible 24-7 via an API (Web Services) or FTP



Coverage

Central and South America: Over 300 airports in 14 countries

Format

Available 24-7 in a dynamic XML feed, using API (Web Services) or FTP

Thank you