Singapore Land Authority

Integrated Geospatial & Statistical Data for Public, Private and People Sectors in Singapore

More Information
SG-SPACE

Singapore GeoSpatial Collaborative Environment

**Synergistic Data**

Vision and Goals

Initiatives

- Business Data
- Satellite Imagery
- Base Maps
- Demographics Data
- Property Data
- Environmental Data
- Transport Data

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**People**
Blogs, Personal Use

**Private**
Build Value-Added Services

**Public**
Publish Info & Services
SG-SPACE
Singapore GeoSpatial Collaborative Environment

Synergistic Data

Vision and Goals

Initiatives

Vision

A Spatially-Enabled Nation

Stakeholders

Government

Enterprises and Communities

Goals

• National level decision making
• Public Security
• Cost effective business
• Location awareness among citizens
SG-SPACE
Singapore GeoSpatial Collaborative Environment

Synergistic Data
Vision and Goals

Initiatives
GeoSpace

Overview

Search Tool
Geocoding Tool
Proximity Tool
Scenario Demo

Sharing by Agencies

1. File Transfer
2. Web Upload
3. Web Service

GeoSpace

1. Data Download
2. Data View

• Planning
• Analysis
• Decision Making
• Operations

Access by Agencies

1. File Transfer
2. Web Upload
3. Web Service

People Data
Land Data
Business Data
Other Agency Sources
Dynamic Data

Planning
Analysis
Decision Making
Operations
GeoSpace

Overview

**Basic Statistic**

- Launch on the 1st of April 2011
- Over 360 layers contributed by over 33 agencies
- Over 1000 registered users
GeoSpace

Overview
Basic Statistic
Search Tool
Geocoding Tool
Scenario Demo

Search Tools – Search Spatial Data in GeoSpace

Cross-search non-spatial data in SG-DATA
GeoSpace

Overview
Basic Statistic
Search Tool
Geocoding Tool
Scenario Demo

GeoTools – Spatially-enabling Agencies’ Data

From this…

... to this
GeoSpace

Overview
Basic Statistic
Search Tool
Geocoding Tool

Scenario Demo
OneMap

Overview

Value Proposition
Functions
Public Agency Users
Mobile Application
Business Users
NGO Users

New & Enhanced Services
Public Agencies

Business Opportunities
Ease of use

Private
Private
People
People
OneMap

Overview

Value Proposition

Functions
Public Agency Users
Mobile Applications
Business Users
NGO Users

Enabler of Service Innovation
Catalyst for Location-Based Services
One-stop Window to Public Sector Info
Authoritative
Resource-Light

74 Participating Agencies; 17 Contributing Agencies; 43 Data Themes
### OneMap

#### Overview

#### Value Proposition

#### Functions

- **Public Agency Users**
  - Street Map & Land Lot based maps
  - Routing (including public transport)
  - SchoolQuery
  - OneMap iPhone App
  - LandQuery
  - PropertyPrices
  - BizMap

- **Mobile Applications**

- **Business Users**

- **NGO Users**

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NEW! indicates newly added features.
OneMap

Overview
Value Proposition

Functions
Public Agency Users
Mobile Applications
Business Users
NGO Users

• LandQuery
OneMap

Overview
Value Proposition

Functions
Public Agency Users
Mobile Applications
Business Users
NGO Users

• Property Prices
OneMap

Overview
Value Proposition

Functions
Public Agency Users
Mobile Applications
Business Users
NGO Users

• BizMap
OneMap

Overview
Value Proposition
Functions
Public Agency Users
Mobile Applications
Business Users
NGO Users

MCYS
Businesses for Families

URA
Application of Season Carparking

PUB
Water Level Information

MICA
Emergency Services
OneMap

Overview
Value Proposition
Functions
Public Agency Users
Mobile Applications
Business Users
NGO Users

National Parks Board Location-Based
Urban Redevelopment Authority Master Plan
Nanyang Polytechnic Pocket OneMap
OneMap

Overview
Value Proposition
Functions
Public Agency Users
Mobile Applications
Business Users

Surround Networks Pte Ltd
Location-Based Commerce

Quantum Inventions Pte Ltd
Customised Real-time Navigation

DP Information
GeoSearch in Questnet & OnTarget Portal

ShowNearby Pte Ltd
ShowNearby Analytics
OneMap

Overview
Value Proposition
Functions
Public Agency Users
Mobile Applications
Business Users

NGO Users

Nature Society of Singapore Pte Ltd
Bird-watching Hotspots in Singapore

National Volunteer and Philanthropy Centre
SG-Cares Volunteering Opportunities
Statistical Data in Singapore

Read More
How are the data collected?

- Population Survey
- Population Statistic
- Agencies need basis
Statistical Data

Collected

**Stored**

Distributed

Where are the data stored?

- Ministries, Statutory Boards, Organs of State & Government Departments.
- Private companies

[Logos of various government and private entities]
### How are the data distributed?

- Whole of Government Initiatives
- Data licensing
- Collaboration among agencies

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Type of Data</th>
<th>Targeted Users</th>
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</thead>
<tbody>
<tr>
<td>GeoSpace</td>
<td>Geospatial data</td>
<td>Government agencies Only</td>
</tr>
<tr>
<td>SG-Data</td>
<td>Textual data</td>
<td>Government agencies Only</td>
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<tr>
<td>OneMap</td>
<td>Geospatial data</td>
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<tr>
<td>Data.gov.sg</td>
<td>Geospatial + Textual data</td>
<td>General Public</td>
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Integrating Geospatial and Statistical Data

Public

Private

People

Read More

Read More

Read More
Integrating Geospatial and Statistical Data

Public

Private

People

80 layers of demographic and household data geo-coded
Integrating Geospatial and Statistical Data

Public

Private

People

i-Singapore@work initiatives

Web Browser and Mobile Platform
Business Application
Wholesale & Retail App
F&B App
Real Estate App
Logistics App
Other / Cross Industry App

Data Mashup

Employees, Business Partners & Customers

Web API over Internet
File Download over Internet
Web API for Data Exchange over Internet
Web API over Internet

Data Storage

Enterprise Data

Public Sector

Govt Agencies
* Data from the Data.gov.sg portal
* Data from Agencies

Private Sector

Data & Services from 3rd Party Service Providers

People Sector

Social Media

SG-SPACE
Integrating Geospatial and Statistical Data

Public

Private

People

Census analytic (mobile application)

Selection of First Location

Basic Facts

Nearby Amenities

People Census analytic (mobile application)
Integrating Geospatial and Statistical Data

Public
Private
People

Census analytic (mobile application)

Selection for Comparison

Comparison Chart
Overcoming Challenges

Challenges

Read More
Challenges

Centralise effort

Privacy
Aggregation

Designate central agency to geo-spatialise statistical data
Challenges

Centralise effort

**Privacy**

Aggregation

Data privacy and confidentiality issue

- Access Framework in GeoSpace

<table>
<thead>
<tr>
<th>Data Access Class</th>
<th>Security Classification</th>
<th>Metadata Listed?</th>
<th>Viewable?</th>
<th>downloadable?</th>
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<tbody>
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<td>1</td>
<td>Secret*</td>
<td>Yes^</td>
<td>No</td>
<td>No</td>
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<td>Yes (subject to permission)</td>
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<td>4</td>
<td>Unclassified</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*Log-in required for traceability

^only if Metadata is classified Confidential and below

^Including market sensitive information
Challenges

Centralise effort

Privacy

Aggregation

Data aggregation and anonymisation in OneMap