



Webraska's user-created content data integration platform

Webraska Inuk is an efficient and flexible platform to dynamically integrate, location-enable and update large databases of user-created content data including points of interest, events, business listings, vehicle positions, specific corporate information and many more

Why is content integration so important?

In the ICT market place, services are user-centric. Today's market successes such as blogs, auction based shopping networks, music platforms, and many others, illustrate how users favour services enabling them to manage, publish and share their own content. Webraska offers service providers a powerful tool allowing them to dynamically integrate and location-enable content data, together with giving them the opportunity to supply their users with a friendly web interface to publish and update their own content information.

Multiple market applications

Webraska Inuk is ideally suited to the needs of:

- Telecom operators, Directory Assistance, Internet portals and other service providers owning large content data bases that require daily dynamic update and automatic maintenance.
- Content providers such as tourist and city guides providers or event organizers who wish to share their content with all users of Webraska Navigation, Orange Navigation, SatNav from Orange, Vodafone Navigator, Where's Navigator, or other Internet or mobile applications.
- Business users who need to update and share locations and addresses at any time with - exclusively - all their mobile employees.
- Consumer service operators such as Mobile Operators wishing to offer rich content, location-enabled advertisement and Web 2.0 services around GPS navigation and other location-based services.

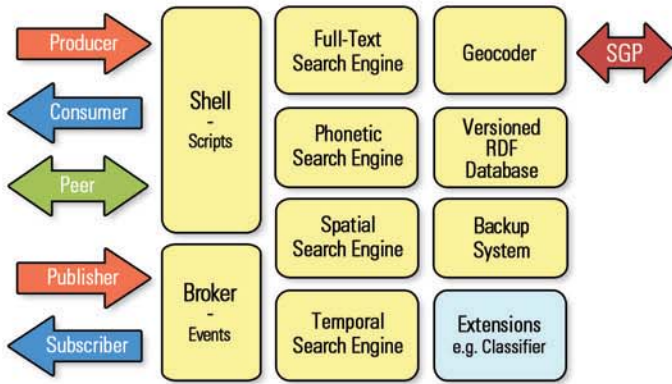
A flexible tool for dynamic content data integration

Webraska Inuk has been designed and developed with maximum performance, flexibility and reliability in mind for the benefit of service providers:

- It offers the capability to define groups of users as well as multiple content categories and decide which groups have access to what content.
- It is both robust and fully scalable: it is based on a peer-to-peer architecture comprised of clusters of nodes that can be scaled according to the amount of data managed.
- It is compatible with multiple types of content data (addresses, events,...): it uses the W3C RDF and RDF Schemas standards to represent data and metadata respectively.
- It is fully decentralised: content data may be provided multiple by contributors; data updates can be committed any time automatically or manually, by any contributors at any frequency.
- It provides developers with standard APIs so that service providers may easily deploy their own applications with a user friendly web based interface and an administration tool to implement restricted or premium access.
- It allows applications to location-enable content data and can directly be interfaced with Webraska's SmartZone Geospatial Platform.
- It supports spatial, temporal, full-text, phonetic indexing and search of data, as well as data description.



Architecture and APIs



Architecture of an Inuk node

Peer-to-peer

- Better scalability and robustness
- Easier deployment

Modular

- Software Bus + Java Bean Components
- Easy to extend

Portable

- 100% Java
- Web Application (servlet/JSP)
- UTF-8 support
- Plain HTTP 1.1 (Multipart-Body) POST

Database

- RDF Data Model
 - W3C standard (2004)
 - Universal, flexible and scalable representation
 - Describe data & meta-data (RDF Schemas)
 - Multiple sources and datasets
- Version Control
 - Save/retrieve all versions of data
 - Concurrent accesses / no locks
 - Merge branches with tip automatically

Shell

- Forth-like interpreter /compiler
 - Server-side scripts
 - Fully featured stack-based language with variables, conditionals, loops...
 - More than 50 built-in functions

Broker

- Simple generic messaging system
- Manage channels and subscriptions
- Broadcast messages
- Subscribers can be notified of Inuk events such as database changes, geocoding, indexing

Integration

- All potentially long-lasting server processes run asynchronously
- Clients post data and spawn integration processes such as geocoding, or indexing
- Clients can get task execution time estimates and/or subscribe to task completion events
- Resources can be integrated manually (typically through a web interface) or automatically (typically by running batch scripts)

Support

- Simple web-based console suitable for testing, development and administration
- Java SDK

Full-Text Search

- Generic and custom analyzers for specific grammars
- Wildcard search
- Proximity (Levenshtein distance) search
- Range search (e.g. Dates)
- Term Boost
- Boolean & Grouping Operators
- Ranked results

Phonetic Search

- Available encoders: Metaphone, Double Metaphone, Soundex, Refined Soundex, Phonex
- Results sorted by match scores

Spatial Search

- Search n * nearest resources within specified distance
- Results sorted by distance from origin point

Temporal Search

- Search resources based on temporal availability (e.g. Opening Hours)

Geocoder

- Geocode or Reverse-Geocode
- Based on SGP4 Location Utility Service API (other APIs upon request)

webraska

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