Qt-Based Google APIs

Integrated Computer Solutions (ICS)

Qt Developer Days
2012

What Are the Google APIs?

- Interface to Google services to help programmers develop applications.
- Offers a variety of APIs, mostly aimed at web developers.
- APIs consist of specialized web services and programs and specialized scripts that enable Internet application developers to easily find and manipulate information on the web.
- Can be used to add value to applications.
- Use the SOAP and WSDL standards to act as an interface between the user's program and Google services.
- Compatible with programming environments such as C++, Java, Perl, and .NET

What Can Be Done With The Google APIs?

- Developers can write applications that can connect remotely to Google services.
- Data communications are executed via Simple Object Access Protocol (SOAP).
- SOAP protocol is an XML-based technology for exchanging information entered into a Web application.
- Developers can initiate search requests against Google's index and receive results, e.g.:
  - as structured data: estimated number of results, URLs, snippets, query time
  - access information in the Google cache
  - check the spelling of words

What Are the Qt-Based Clients for Google APIs?

- ICS has published 18 Qt and QML clients for popular Google APIs.
- Make it easy to integrate Google service functionality into your Qt-based applications.
- For many APIs both C++ and QML clients are provided.
- QML is currently targeted at MeeGo (Harmattan) and Symbian platforms.
- Open source.
- Hosted at code.google.com

What APIs are Supported?

- Google Books (C++ and QML)
- Google Tasks (C++ and QML)
- Google Maps (C++ and QML)
- Google Latitude (C++ and QML)
- Google Blogger (C++)
- Google Calendar (C++)
- Google Drive (C++)

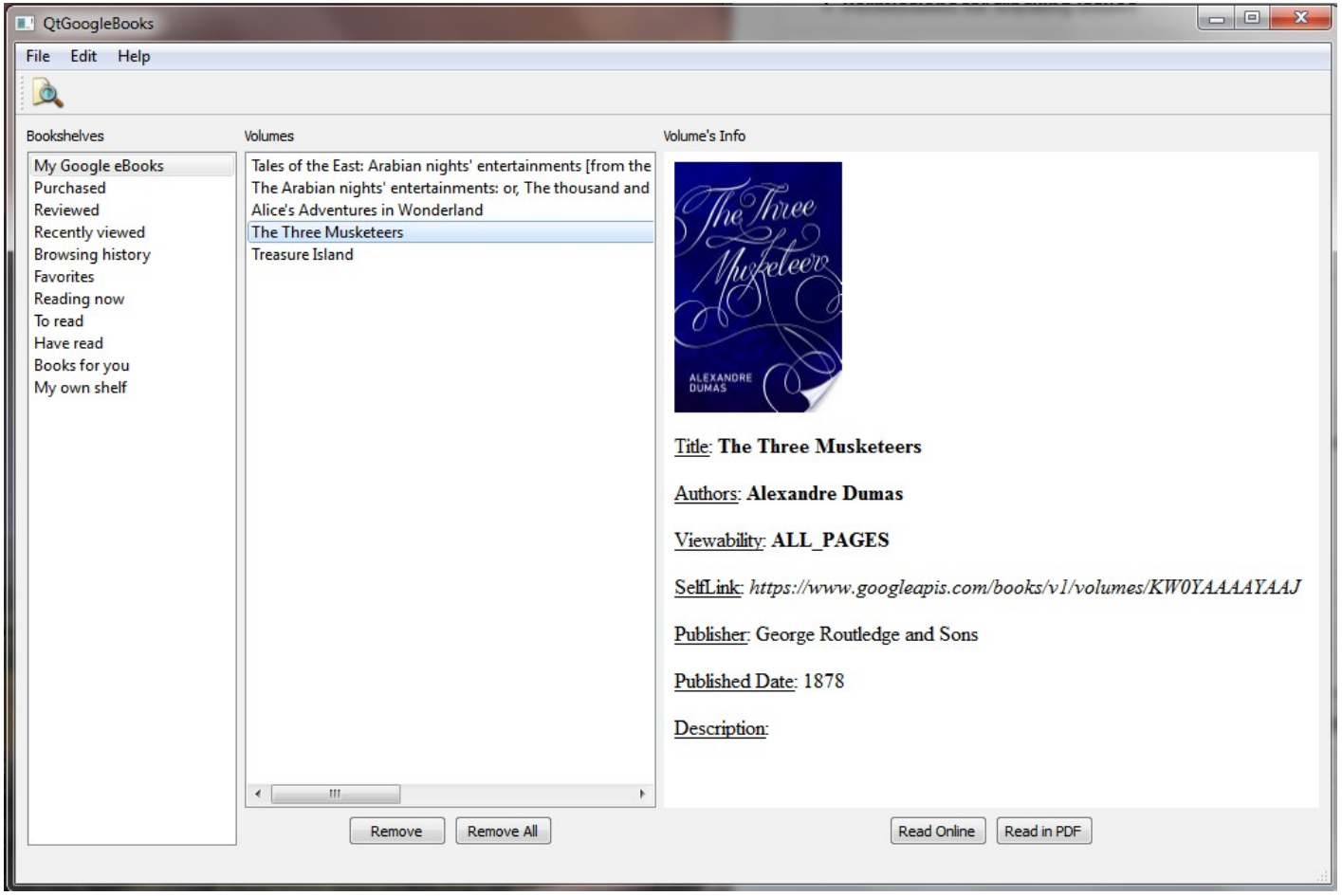
What APIs are Supported?

- Google Freebase (C++)
- Google Places (C++)
- Google Plus (C++)
- Google Shopping (C++)
- OAuth Library (C++)
- Google Big Query (C++)
- Google Prediction (C++)

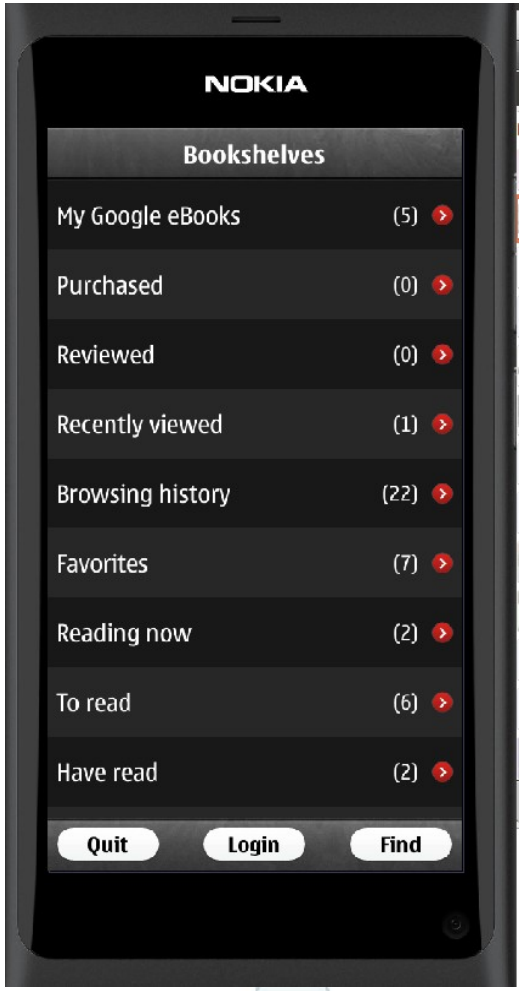
Qt Google Books

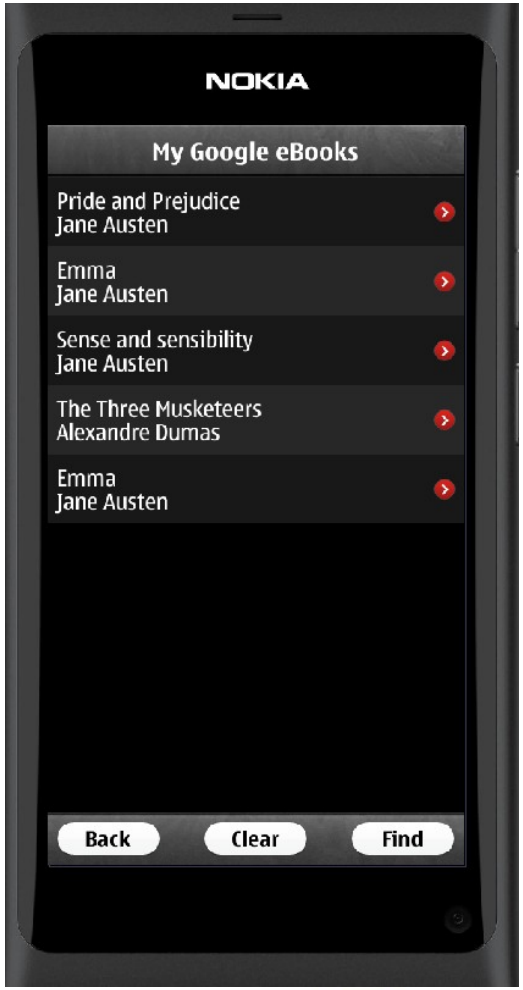
- C++ and QML clients which use the Google Books API.
- Google Books is Google's effort to make book content more discoverable on the Web.
- You can integrate this repository including search results and social features into your application
- Can embed book previews.
- Hosted at:
  - http://code.google.com/p/qml-google-books/
  - http://code.google.com/p/qt-google-books/

Qt Google Books - Desktop



Qt Google Books – Nokia N9 (MeeGo)

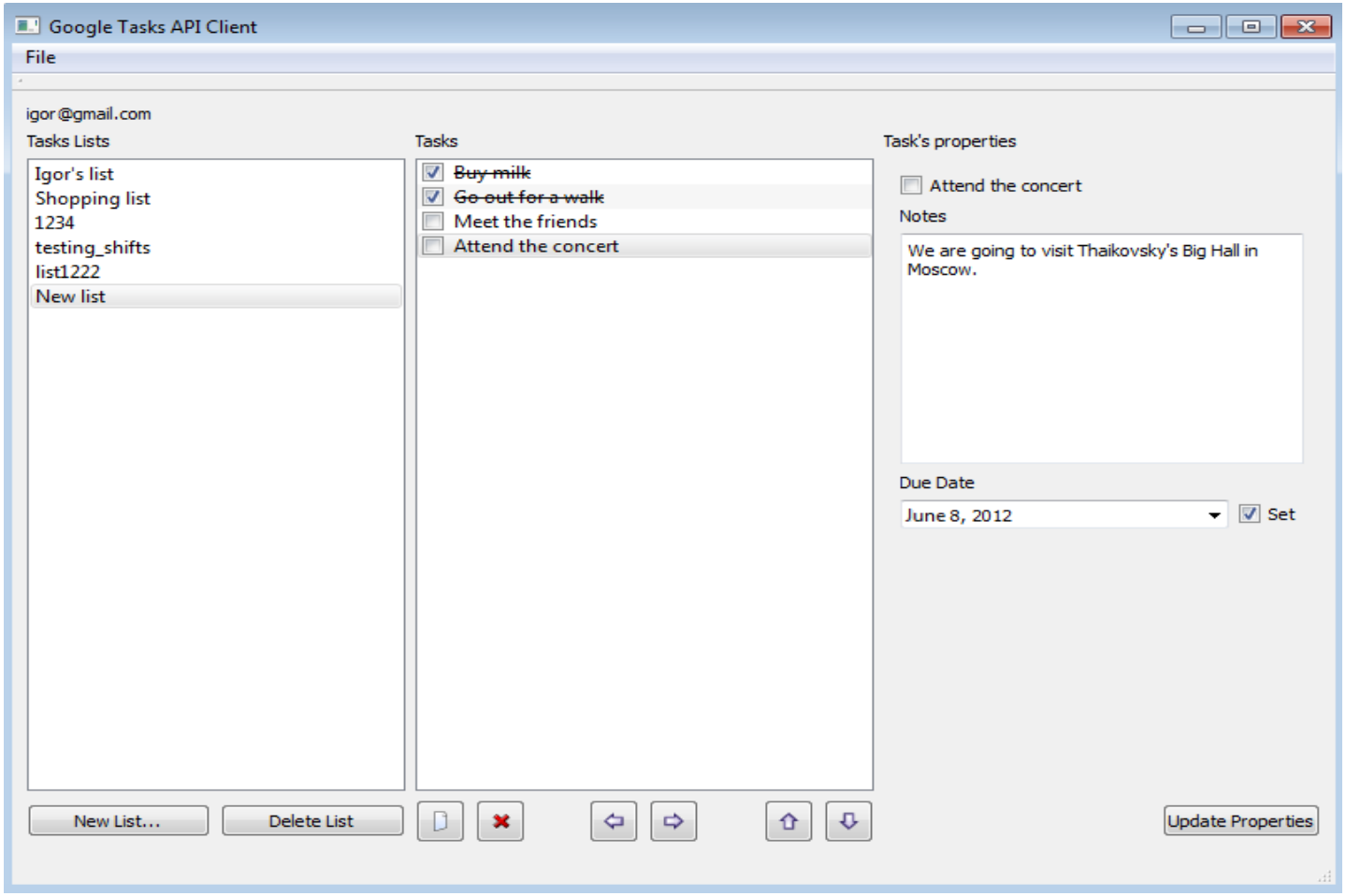




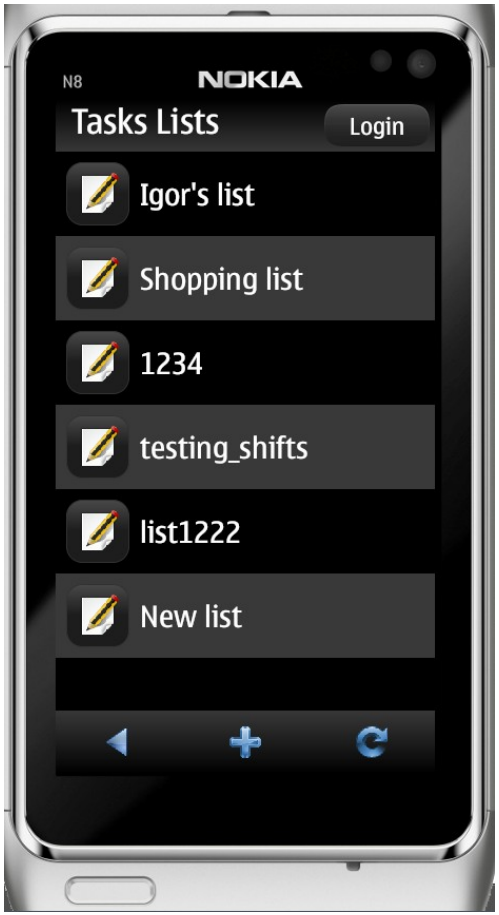
Qt Google Tasks

- C++ and QML clients which use the Google Tasks API.
- The Google Tasks API provides developers with a set of APIs for searching, reading, and updating Google Tasks content and metadata.
- Hosted at:
  - http://code.google.com/p/qml-google-tasks/
  - http://code.google.com/p/qt-google-tasks/

Qt Google Tasks - Desktop



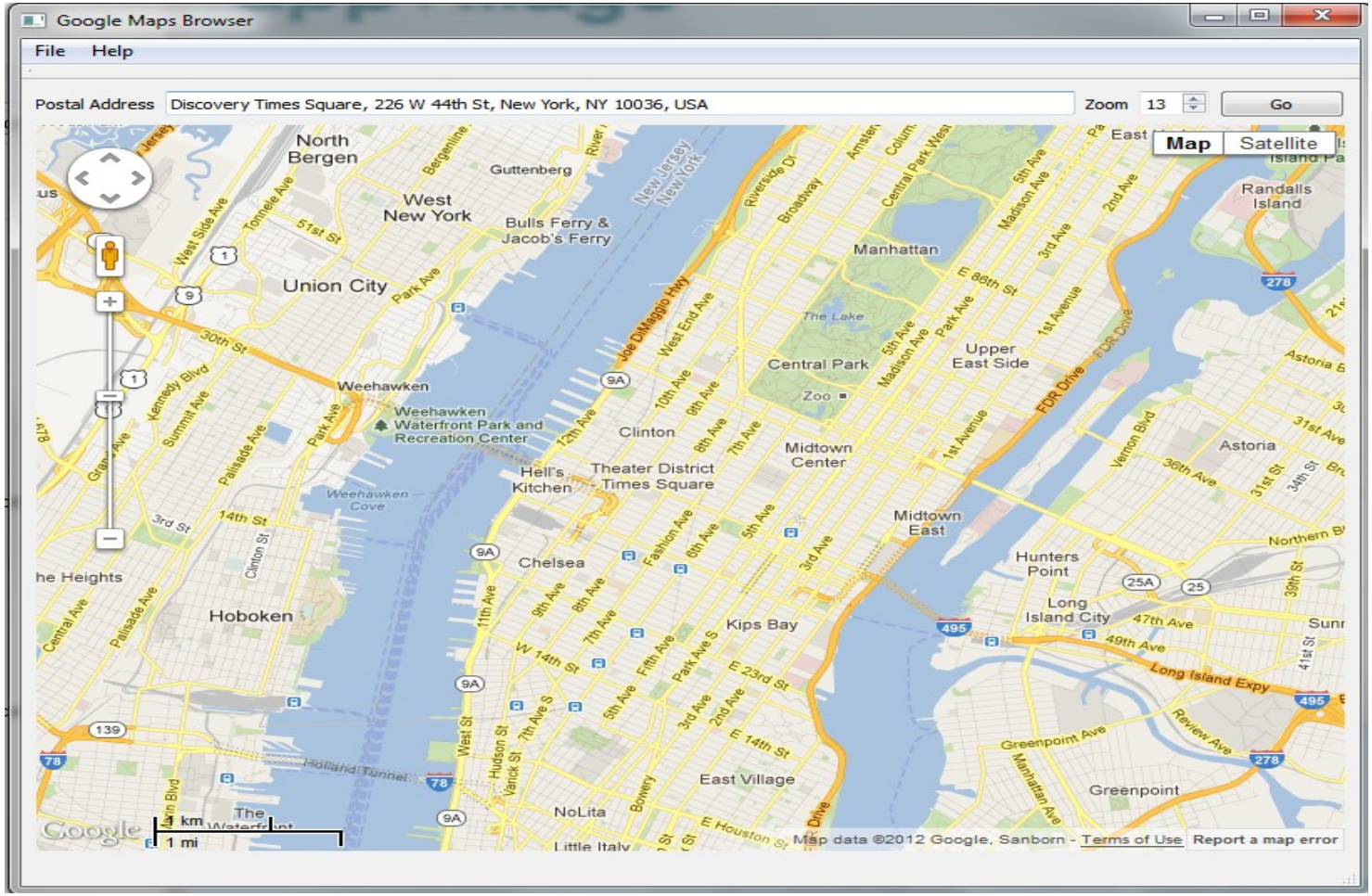
Qt Google Tasks – Nokia N8 (Symbian)



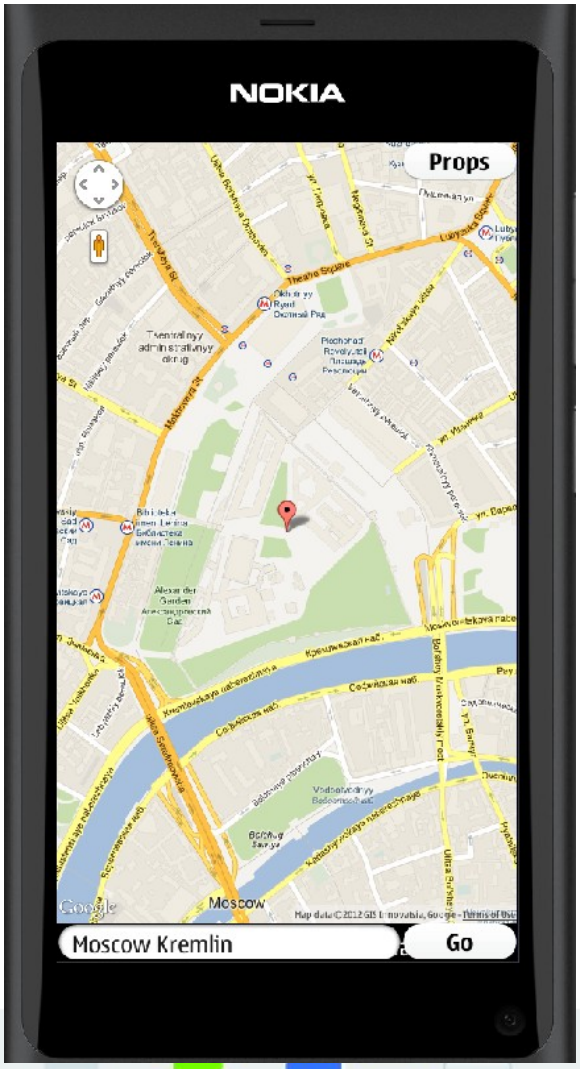
Qt Google Maps

- C++ and QML clients which use the Google Maps API (v3).
- The Google Maps Image APIs make it easy to embed a static Google Maps image or Street View panorama into application with no need for JavaScript.
- Hosted at:
  - http://code.google.com/p/qml-google-maps/
  - http://code.google.com/p/qt-google-maps/

Qt Google Maps - Desktop



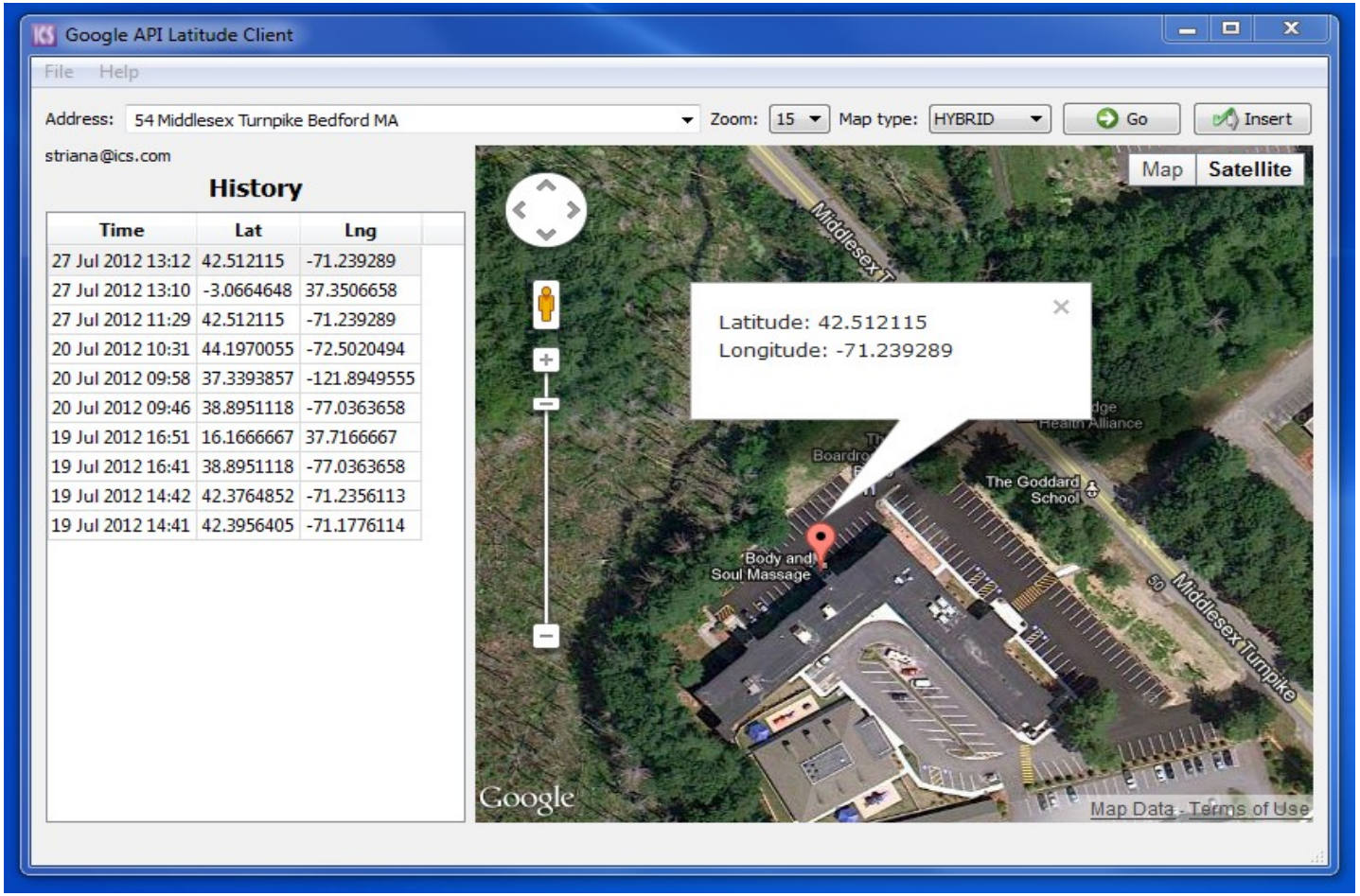
Qt Google Maps – Nokia N9 (MeeGo)



Qt Google Latitude

- QML and C++ clients which use the Google Latitude API.
- The Google Latitude API allows programs to integrate with Google Latitude, enabling users to update and read their current location, location history, etc.
- Hosted at:
  - http://code.google.com/p/qml-google-latitude/
  - http://code.google.com/p/qt-google-latitude/

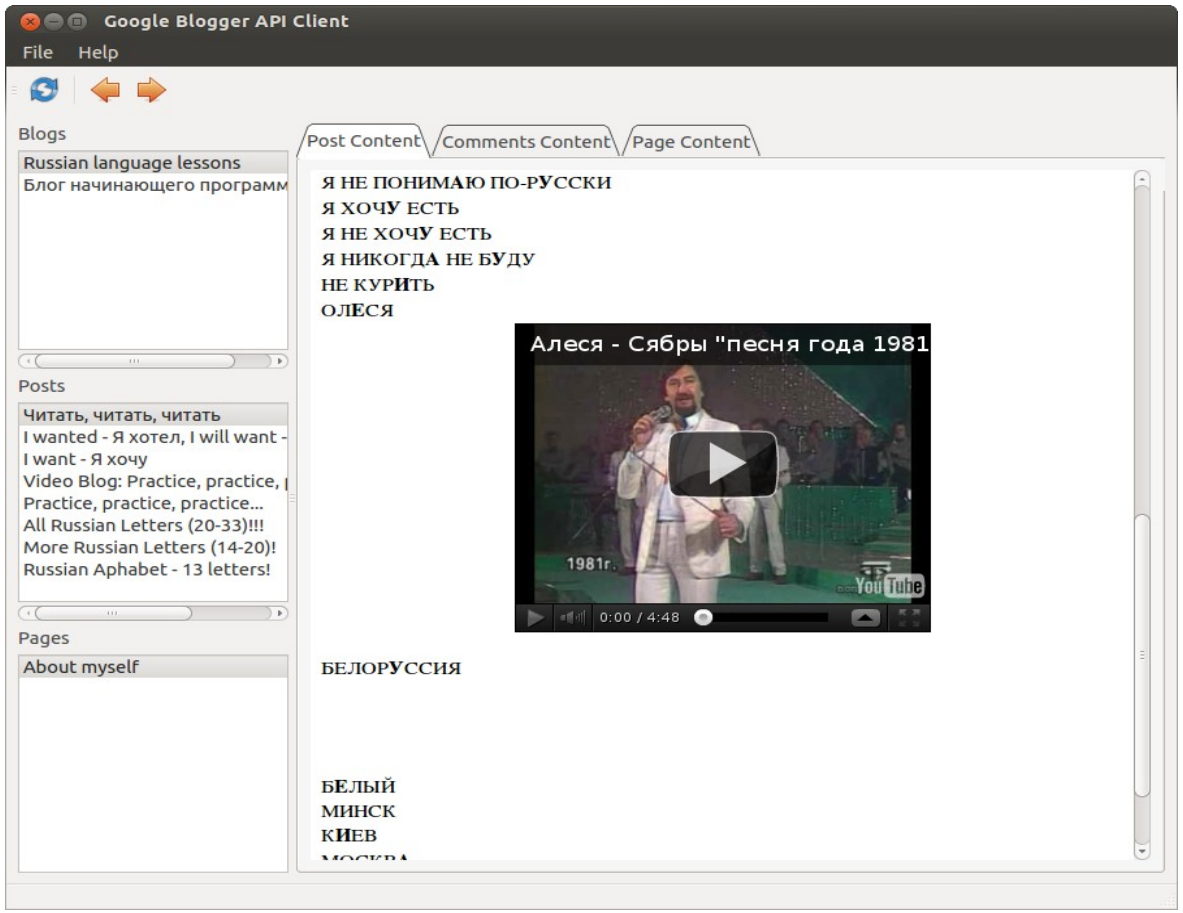
Qt Google Latitude



Qt Google Blogger

- Qt C++ client which uses the Google Blogger API.
- The Blogger Data API allows client applications to view and update Blogger content in the form of Google Data API feeds.
- Hosted at:
  - http://code.google.com/p/qt-google-blogger/

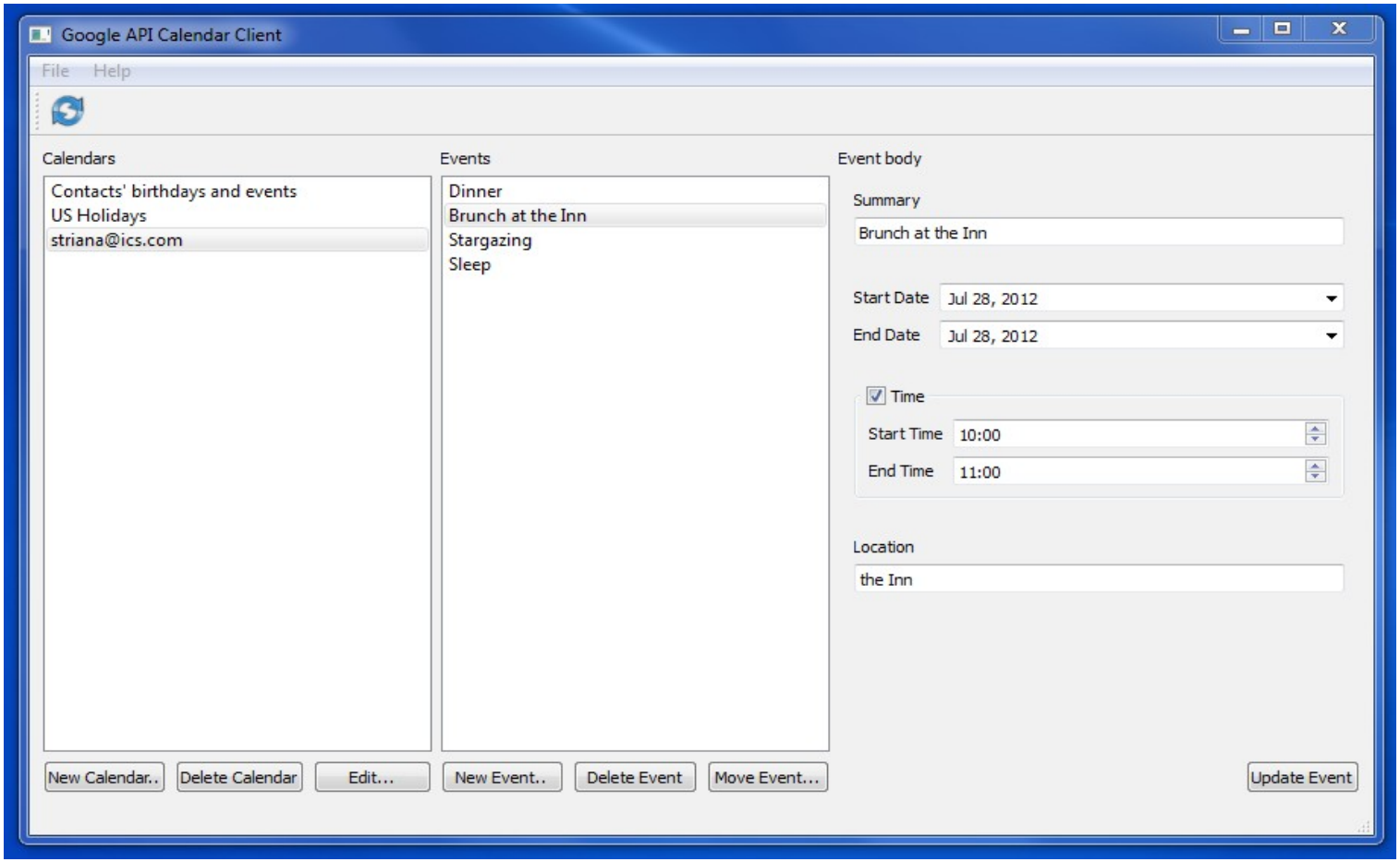
Qt Google Blogger



Qt Google Calendar

- Qt C++ client which uses the Google Calendar API.
- The Google Calendar API lets you develop client applications that create new events, edit or delete existing events, and search for events.
- Hosted at:
  - http://code.google.com/p/qt-google-calendar/

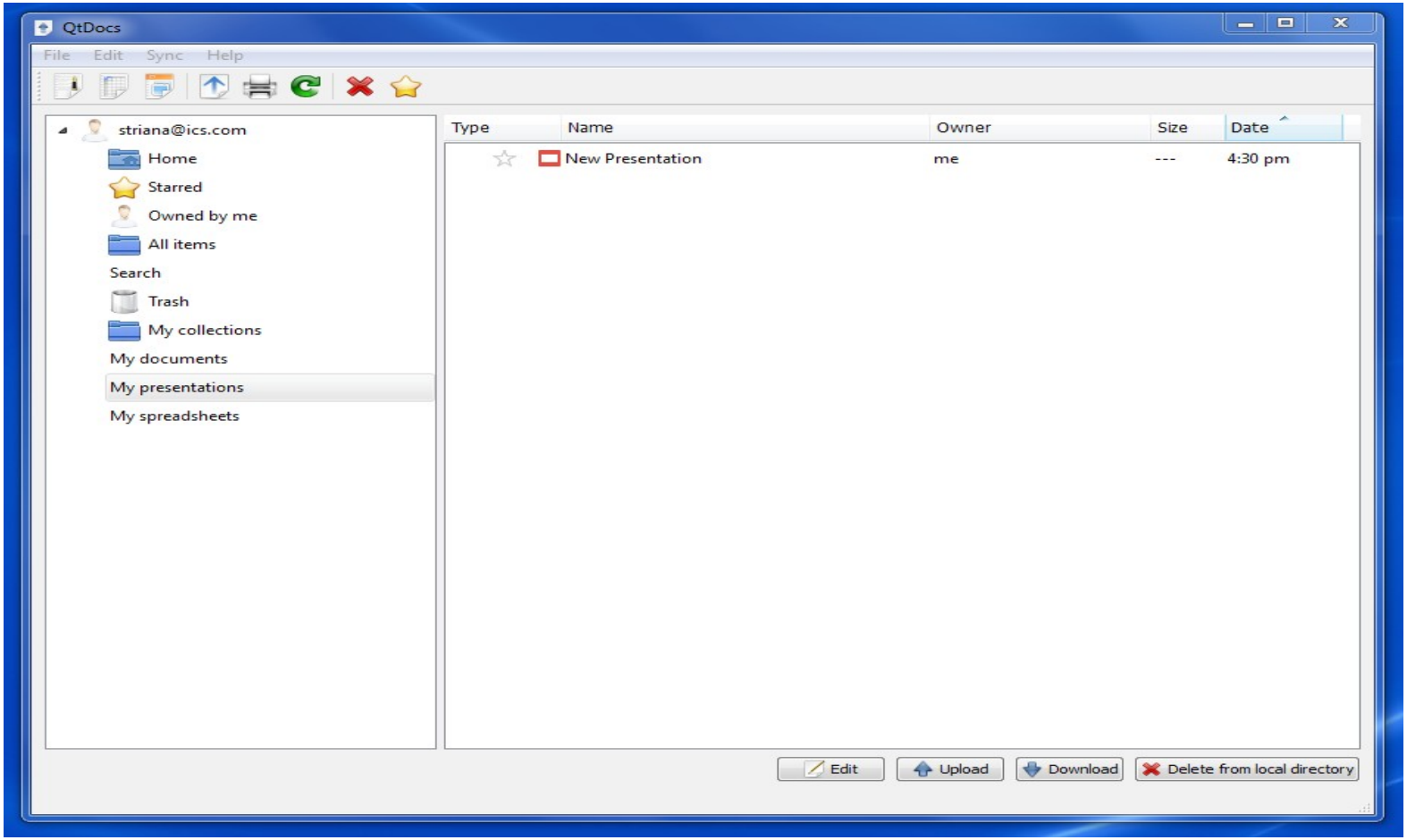
Qt Google Calendar



Qt Google Drive

- Qt C++ client which uses the Google Drive API.
- These APIs allow users to create, open, save and share files on Google Drive.
- Hosted at:
  - http://code.google.com/p/qt-google-drive/

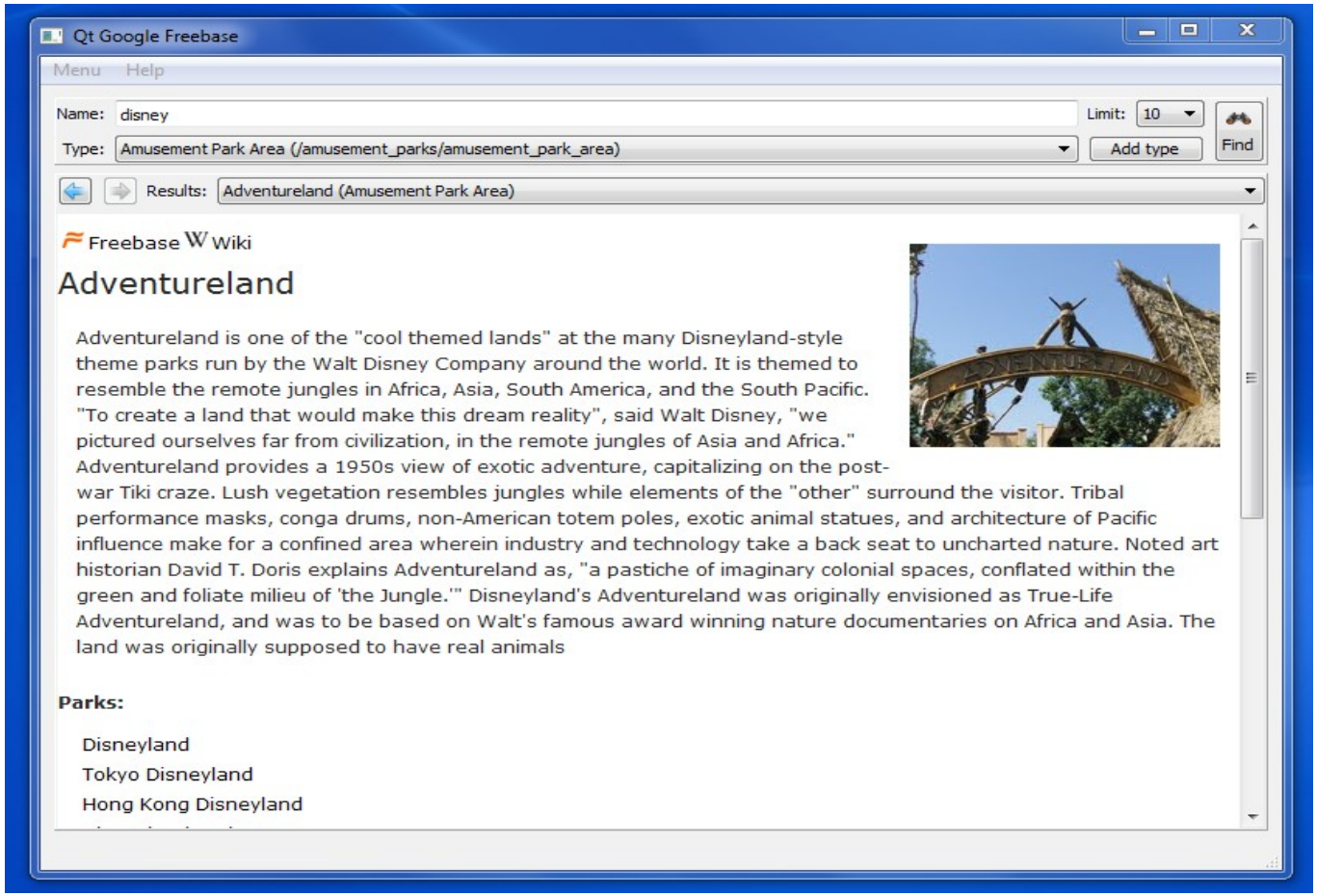
Qt Google Drive



Qt Google Freebase

- Qt C++ client which uses the Freebase API.
- Freebase is a large collaborative knowledge base consisting of metadata composed mainly by its community members.
- An online collection of structured data harvested from many sources, including individual Wiki contributions.
- The Freebase APIs can be used to access and update the structured data.
- Hosted at:
  - http://code.google.com/p/qt-google-freebase/

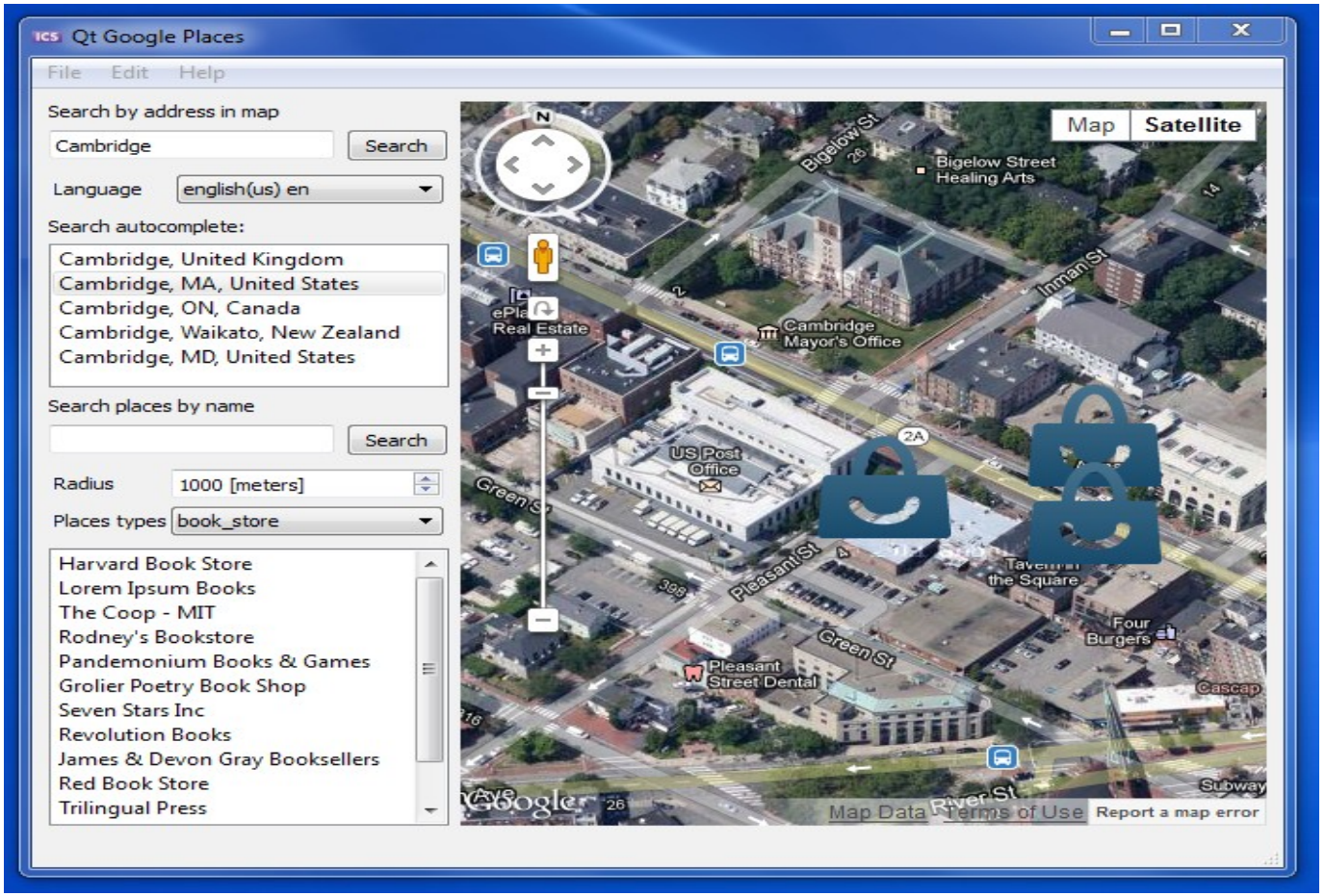
Qt Google Freebase



Qt Google Places

- Qt C++ client which uses the Google Places API.
- The Google Places API is a service that returns information about Places – as establishments, geographic locations, or prominent points of interest – using HTTP requests.
- Place requests specify locations as latitude/longitude coordinates.
- Hosted at:
  - http://code.google.com/p/qt-google-places/

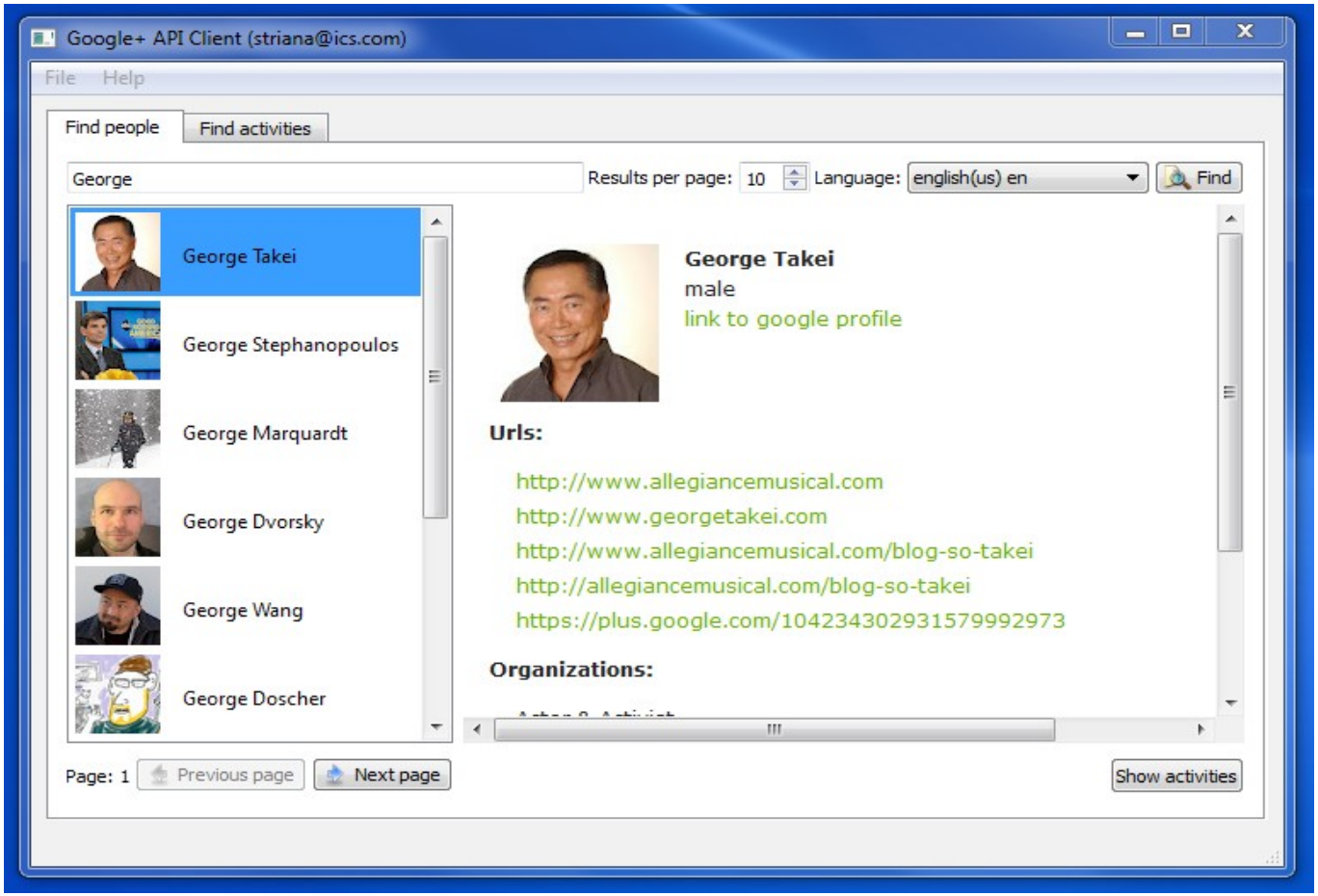
Qt Google Places



Qt Google Plus

- Qt C++ client which uses the Google+ API.
- The Google+ API is the programming interface to the Google+ social networking service.
- You can use the API to integrate your application with Google+ to support social networking features.
- Hosted at:
  - http://code.google.com/p/qt-google-plus/

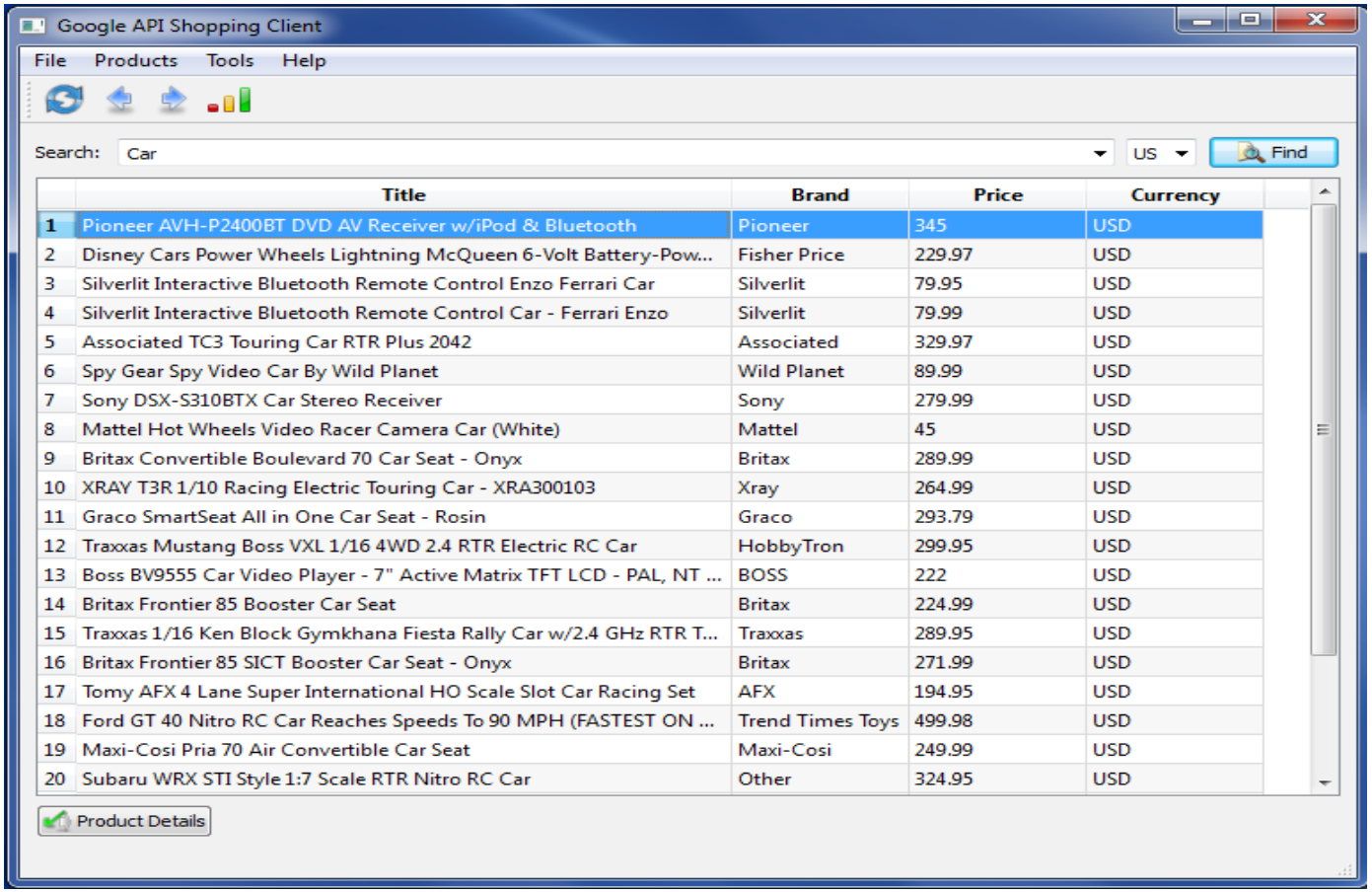
Qt Google Plus



Qt Google Shopping

- Qt C++ client which uses the Google Shopping API.
- The Google Search API for Shopping allows developers, to build applications using product data.
- Hosted at:
  - http://code.google.com/p/qt-google-shopping/

Qt Google Shopping



	Title	Brand	Price	Currency
1	Pioneer AVH-P2400BT DVD AV Receiver w/iPod & Bluetooth	Pioneer	345	USD
2	Disney Cars Power Wheels Lightning McQueen 6-Volt Battery-Pow...	Fisher Price	229.97	USD
3	Silverlit Interactive Bluetooth Remote Control Enzo Ferrari Car	Silverlit	79.95	USD
4	Silverlit Interactive Bluetooth Remote Control Car - Ferrari Enzo	Silverlit	79.99	USD
5	Associated TC3 Touring Car RTR Plus 2042	Associated	329.97	USD
6	Spy Gear Spy Video Car By Wild Planet	Wild Planet	89.99	USD
7	Sony DSX-S310BTX Car Stereo Receiver	Sony	279.99	USD
8	Mattel Hot Wheels Video Racer Camera Car (White)	Mattel	45	USD
9	Britax Convertible Boulevard 70 Car Seat - Onyx	Britax	289.99	USD
10	XRAY T3R 1/10 Racing Electric Touring Car - XRA300103	Xray	264.99	USD
11	Graco SmartSeat All in One Car Seat - Rosin	Graco	293.79	USD
12	Traxxas Mustang Boss VXL 1/16 4WD 2.4 RTR Electric RC Car	HobbyTron	299.95	USD
13	Boss BV9555 Car Video Player - 7" Active Matrix TFT LCD - PAL, NT ...	BOSS	222	USD
14	Britax Frontier 85 Booster Car Seat	Britax	224.99	USD
15	Traxxas 1/16 Ken Block Gymkhana Fiesta Rally Car w/2.4 GHz RTR T...	Traxxas	289.95	USD
16	Britax Frontier 85 SICT Booster Car Seat - Onyx	Britax	271.99	USD
17	Tomy AFX 4 Lane Super International HO Scale Slot Car Racing Set	AFX	194.95	USD
18	Ford GT 40 Nitro RC Car Reaches Speeds To 90 MPH (FASTEST ON ...	Trend Times Toys	499.98	USD
19	Maxi-Cosi Pria 70 Air Convertible Car Seat	Maxi-Cosi	249.99	USD
20	Subaru WRX STI Style 1:7 Scale RTR Nitro RC Car	Other	324.95	USD

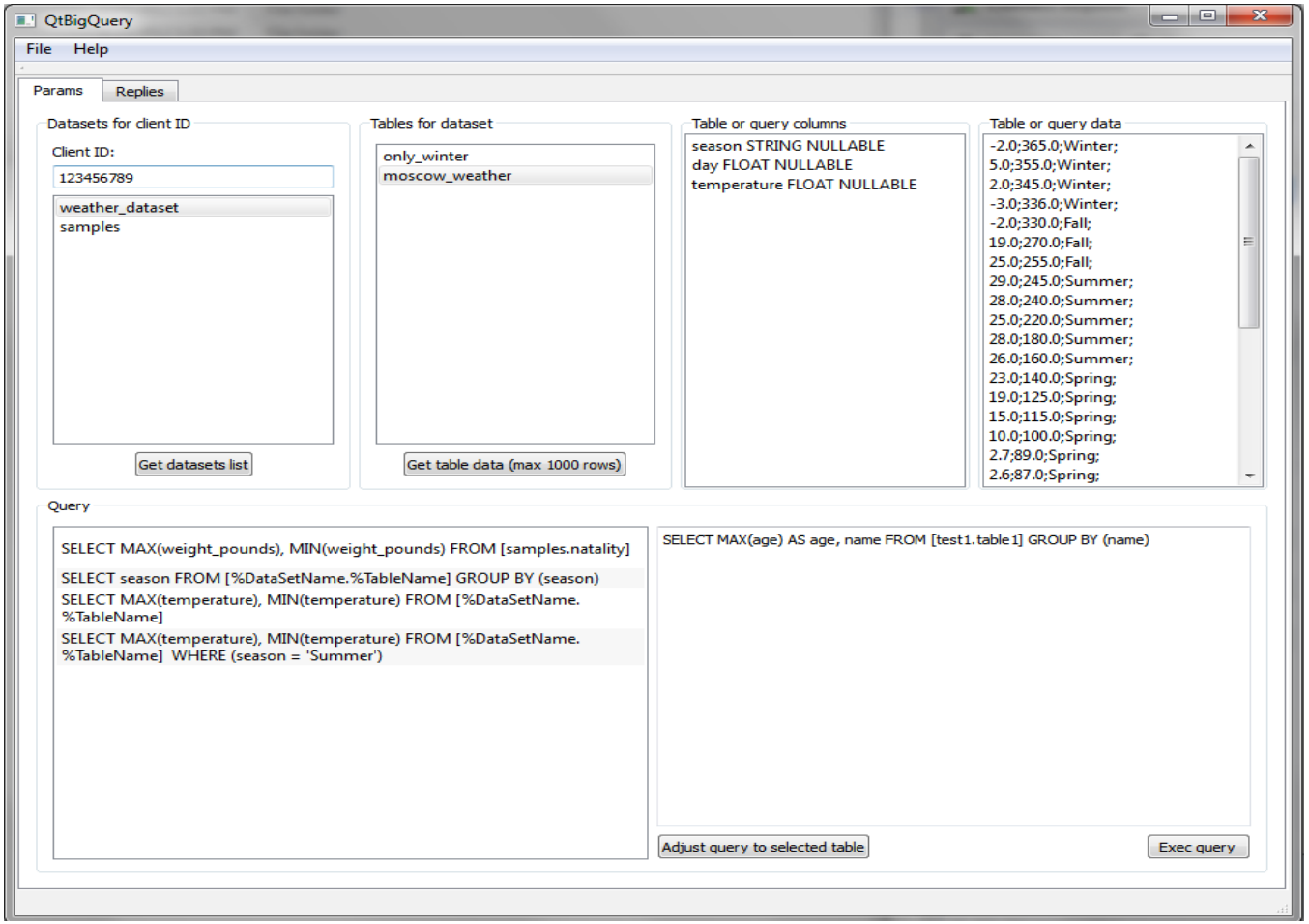
Qt OAuth Library

- Qt Library providing OAuth 2.0 for the Google API
- Google APIs use the OAuth 2.0 protocol for authentication and authorization.
- Some of the API clients have a dependency on this module.
- Hosted at:
  - http://code.google.com/p/qt-oauth-lib/

Qt Google Big Query

- Qt C++ client which uses the Google Big Query API
- Google Big Query is a web service that lets you do interactive analysis of massive datasets – up to billions of rows.
- Hosted at:
  - http://code.google.com/p/qt-google-bigquery/

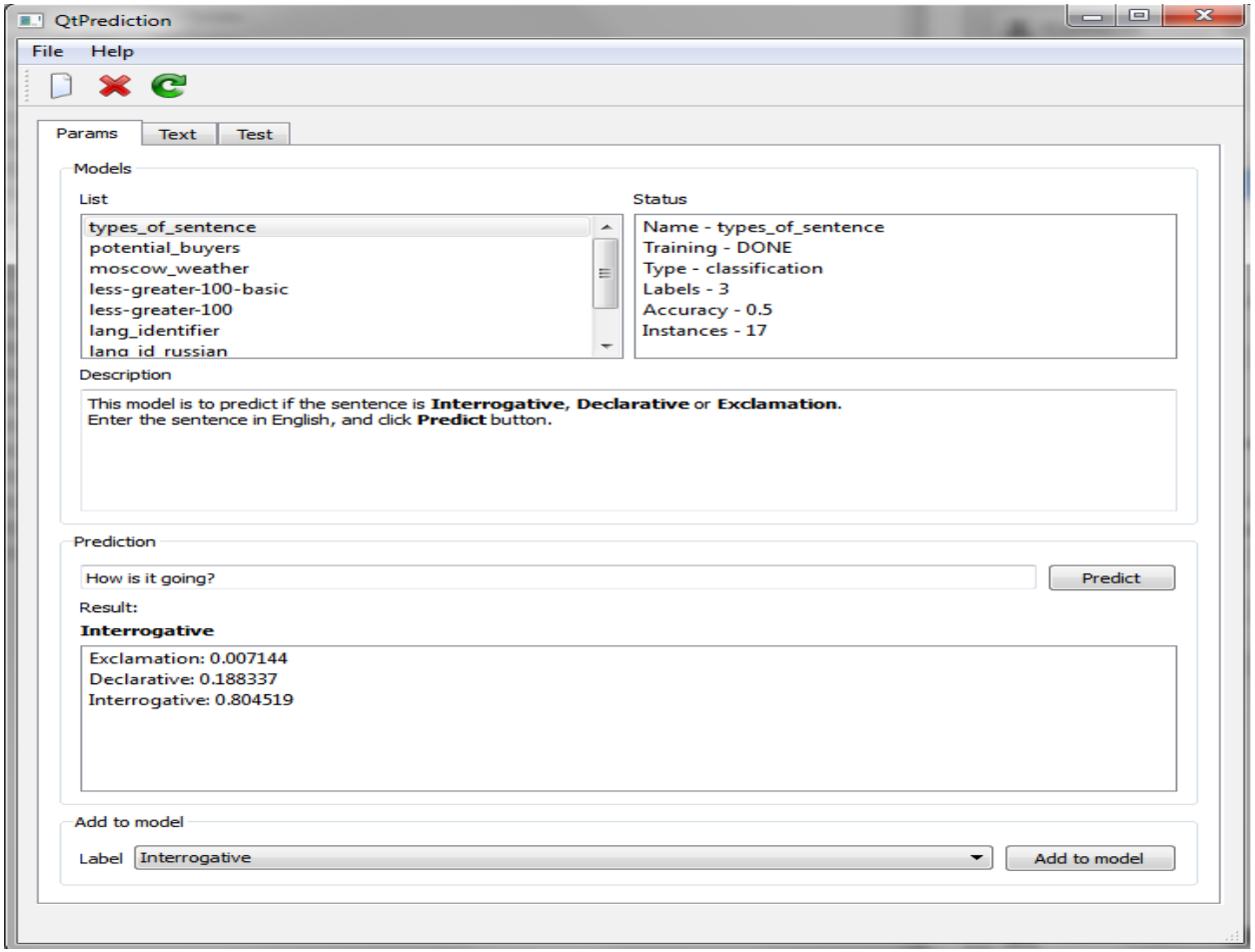
Qt Big Query



Qt Google Prediction

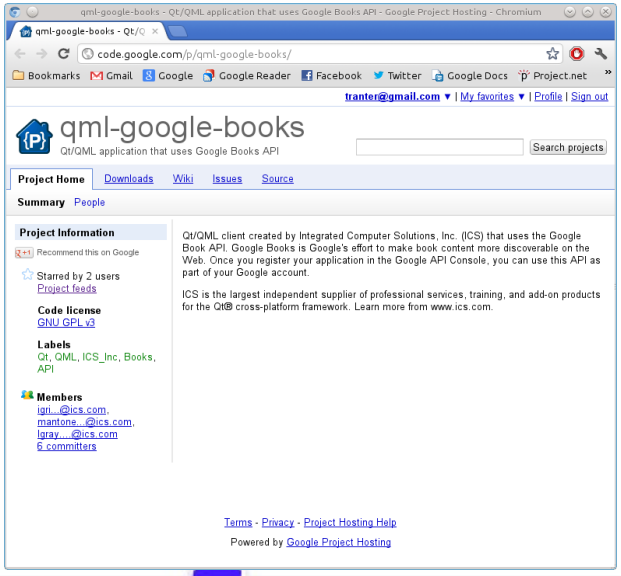
- Qt C++ client which uses the Google Prediction API.
- The Google Prediction API provides pattern-matching and machine learning capabilities.
- Hosted at:
  - http://code.google.com/p/qt-google-prediction/

Qt Google Prediction



How To Get Started

- Get source code from code.google.com
- See Wiki documentation for any build requirements and dependencies (e.g. QJson).
- Each project has a Wiki and issue tracker.
- C++ applications should work on Windows, Linux, and Mac OS X.
- Help test and contribute to code.



How To Get Started

- Projects in Google Code do not contain Google Application secrets.
- Need to go through registering Google Application and modifying the code to add your application secrets.
- For Prediction and Big Query you may want to add billing to your account.

Demos

- Also see additional demos at the ICS booth.

Future Work

- Enhancements
- Bug fixes
- Support for more APIs
- Better QML support for platforms other than MeeGo (Harmattan) and Symbian

References

- http://www.ics.com/technologies/qt_google_apis/
- http://code.google.com/
- Each API project has git repository, downloads, Wiki, and bug tracker.

Q & A

- Questions?

The End

Thank you very much for attending!