



# Linked Data Connections in App Inventor

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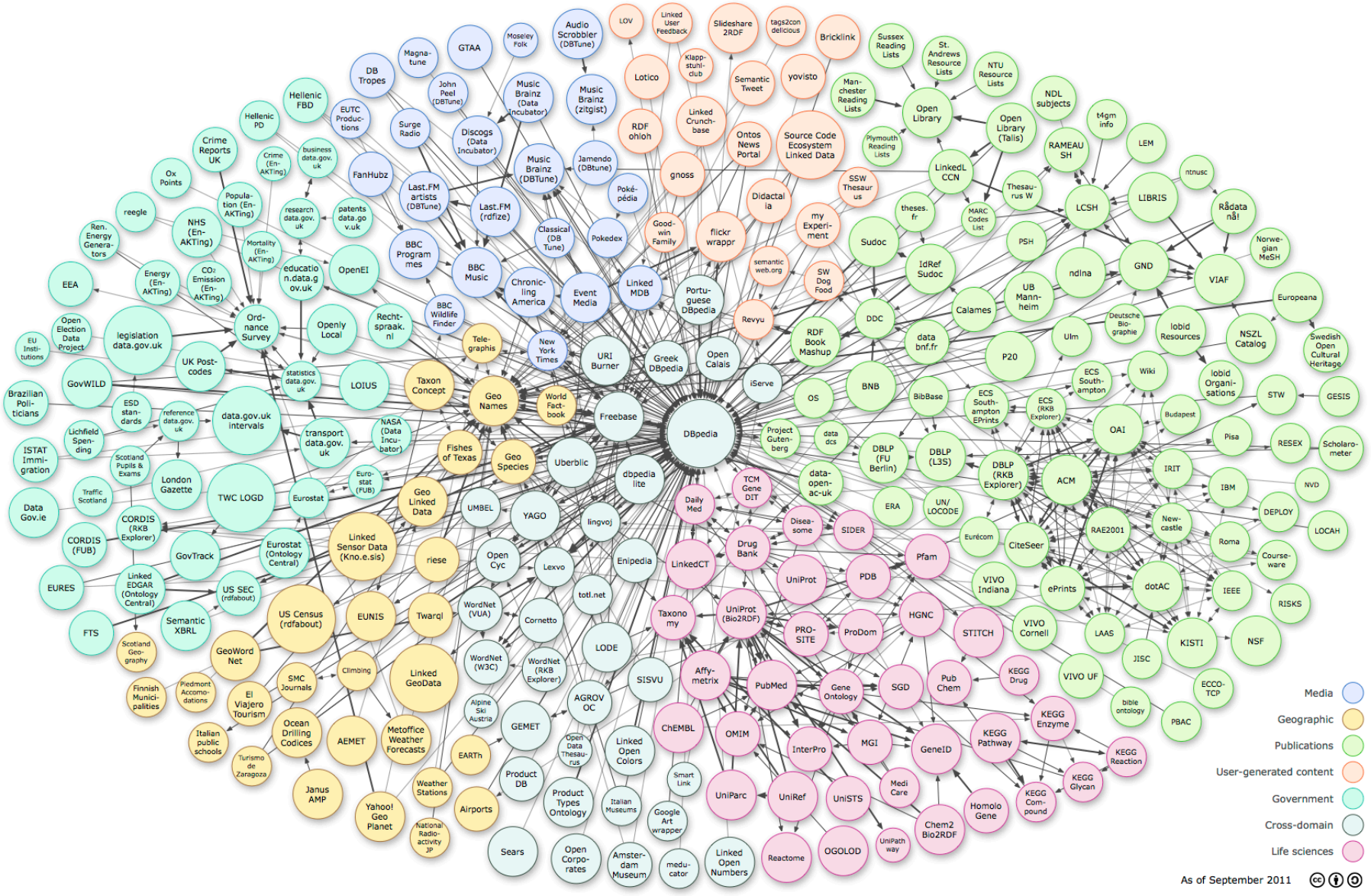
# Linked Data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Geo Names
Taxon Concept
World Fact-book
Uberblic
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Lexvo
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Cornetto
LODE
SISVU
AGROVOC
GEMET
Linked GeoData
Twarql
WordNet (VUA)
WordNet (W3C)
WordNet (RKB Explorer)
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US Census (rdfabout)
Linked Sensor Data (Kno.e.sis)
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Eurostat
Eurostat (FUB)
UMBEL
Geo Linked Data
Geo Species
Fishes of Texas
Taxon Concept
Geo Names
Tele-graphis
New York Times
URI Burner
Greek DBpedia
Open Calais
Linked MDB
Event Media
Chronic-ling America
BBC Music
BBC Programmes
BBC Wildlife Finder
Classical (DB Tune)
Pokedex
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Last.FM artists (DBTune)
Jamendo (DBTune)
Music Brainz (DBTune)
Music Brainz (zitgist)
Music Brainz (Data Incubator)
Discogs (Data Incubator)
Surge Radio
Audio Scrobbler (DBTune)
Moseley Folk
GTAA
Magna-tune
John Peel (DBTune)
DB Tropes
Hellenic FBD
EUTC Produc-tions
FanHubz
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Crime Reports UK
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Popula-tion (En-AKTing)
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research data.gov.uk
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Ren. Energy Genera-tors
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EEA
education.data.gov.uk
OpenEI
Openly Local
Recht-spraak.nl
Ord-nance Survey
legislation data.gov.uk
Open Election Data Project
EU Insti-tutions
UK Post-codes
GovWILD
Brazilian Poli-ticians
ESD stan-dards
Lichfield Spen-ding
ISTAT Immi-gration
Data Gov.ie
CORDIS (FUB)
CORDIS (RKB Explorer)
EURES
FTS
Scotland Geo-graphy
Finnish Munici-palities
Piedmont Accomo-dations
Italian public schools
Turismo de Zaragoza
Janus AMP
Yahoo! Geo Planet
Weather Stations
National Radio-activity JP
Sears
Airports
Product DB
Product Types Ontology
Open Corpo-rates
Amster-dam Museum
medu-cator
Linked Open Numbers
Reactome
OGOLOD
UniPath way
Chem2 Bio2RDF
Homolo Gene
KEGG Com-pound
KEGG Glycan
KEGG Reaction
KEGG Pathway
KEGG Enzyme
KEGG Drug
Pub Chem
GeneID
Medi Care
UniSTS
UniRef
UniParc
Smart Link
Google Art wrapper
Italian Museums
Linked Open Colors
Open Data Thesau-rus
Alpine Ski Austria
EARTh
Metoffice Weather Forecasts
AEMET
Ocean Drilling Codices
SMC Journals
El Viajero Tourism
Climbing
GeoWord Net
Semantic XBRL
US SEC (rdfabout)
Linked EDGAR (Ontology Central)
GovTrack
TWC LOGD
London Gazette
Traffic Scotland
Scotland Pupils & Exams
Lichfield Spen-ding
reference data.gov.uk
data.gov.uk intervals
transport data.gov.uk
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LOIUS
statistics data.gov.uk
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Drug Bank
Taxono my
UniProt (Bio2RDF)
Affy-metrix
ChEMBL
OMIM
InterPro
UniProt
PDB
PRO-SITE
ProDom
PubMed
Gene Ontology
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HGNC
STITCH
Pfam
SIDER
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Daily Med
TCM Gene DIT
Project Guten-berg
data dcs
data-open-ac-uk
DBLP (FU Berlin)
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DBLP (RKB Explorer)
ACM
OAI
ECS South-ampton
ECS South-ampton EPrints
ECS (RKB Explorer)
BibBase
BNB
OS
iServe
RDF Book Mashup
Revyu
Portu-guese DBpedia
flickr wrappr
Good-win Family
Poké-pédia
gnoss
RDF ohloh
Linked Crunch-base
Lotico
LOV
Linked User Feedback
Slideshare 2RDF
tags2con delicious
Bricklink
Semantic Tweet
yovisto
Ontos News Portal
Source Code Ecosystem Linked Data
Didactalia
my Experiment
SSW Thesaurus
SW Dog Food
semantic web.org
Sudoc
IdRef Sudoc
Calames
DDC
data bnf.fr
P20
UB Mann-heim
ndlna
Ulm
Deutsche Bio-graphie
lobid Resources
NSZL Catalog
Europeana
Swedish Open Cultural Heritage
GND
VIAF
LCSH
LIBRIS
Råda data nå!
Norwe-gian MeSH
PSH
Thesau-rus W
MARC Codes List
theses.fr
LinkedL CCN
Open Library
Open Library (Talis)
Man-chester Reading Lists
Plymouth Reading Lists
Sussex Reading Lists
St. Andrews Resource Lists
NTU Resource Lists
NDL subjects
RAMEAU SH
LEM
t4gm info
ntnusc
Wiki
lobid Organi-sations
STW
GESIS
Budapest
Pisa
RESEX
Scholaro-meter
IRIT
IBM
NVD
DEPLOY
LOCAH
Roma
Course-ware
IEEE
RISKS
NSF
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dotAC
ePrints
VIVO Indiana
VIVO Cornell
VIVO UF
LAAS
JISC
ECCO-TCP
PBAC
bible ontology
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New-castle
CiteSeer
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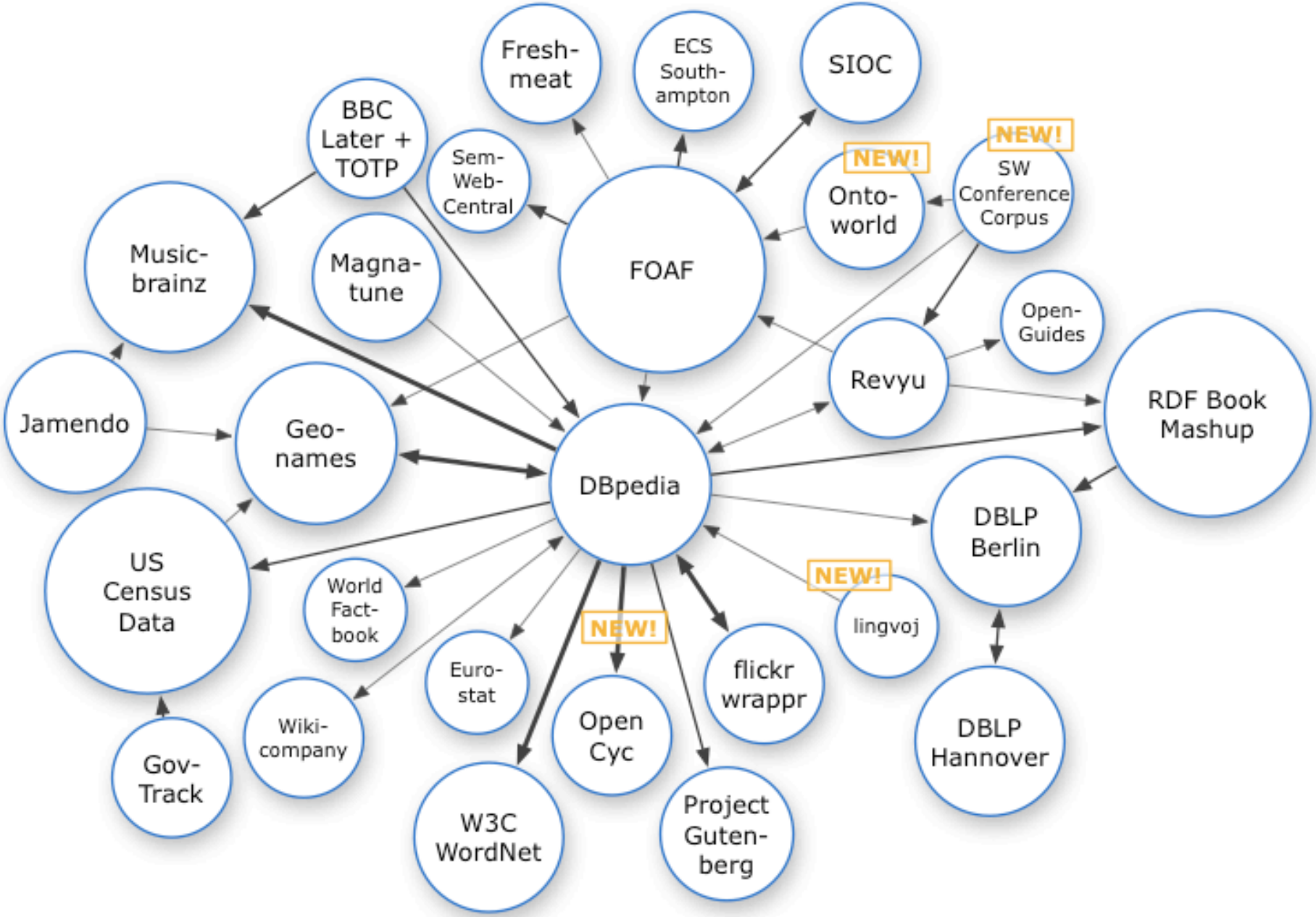
ERA
UN/ LOCODE
Media
Geographic
Publications
User-generated content
Government
Cross-domain
Life sciences
As of September 2011

# Linked Data Evolution

2007 → now


Fresh-
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Guides
Revyu
RDF Book
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Jamendo
Geo-
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Data
World
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book
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NEW!
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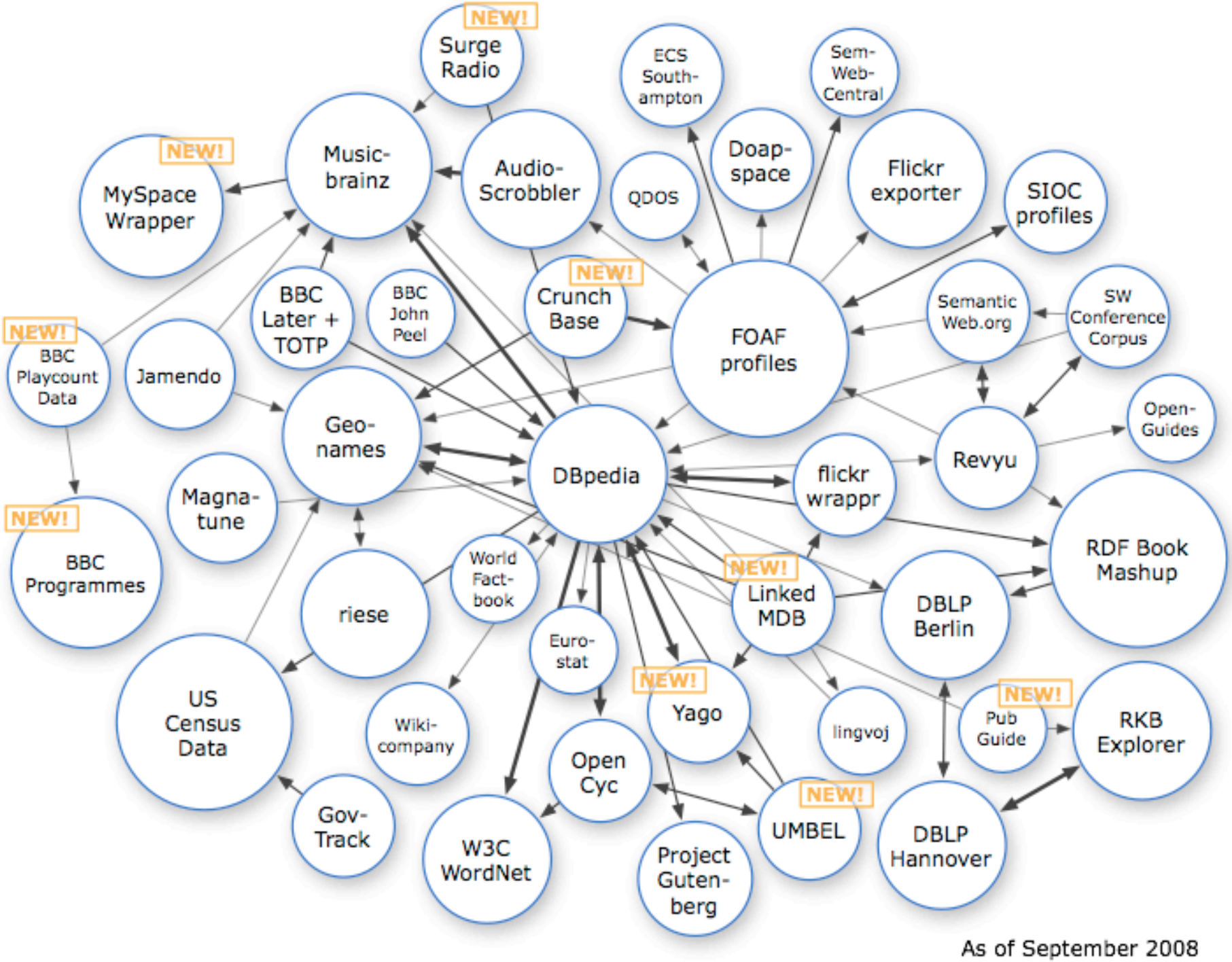
NEW!
Surge Radio
ECS South-ampton
Sem-Web-Central
NEW!
MySpace Wrapper
Music-brainz
Audio-Scrobbler
QDOS
Doap-space
Flickr exporter
SIOC profiles
BBC Later + TOTP
BBC John Peel
NEW!
Crunch Base
FOAF profiles
Semantic Web.org
SW Conference Corpus
NEW!
BBC Playcount Data
Jamendo
Geo-names
DBpedia
Revyu
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Magna-tune
flickr wrappr
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BBC Programmes
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RDF Book Mashup
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Linked MDB
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Pub Guide
RKB Explorer
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W3C WordNet
Project Gutem-berg
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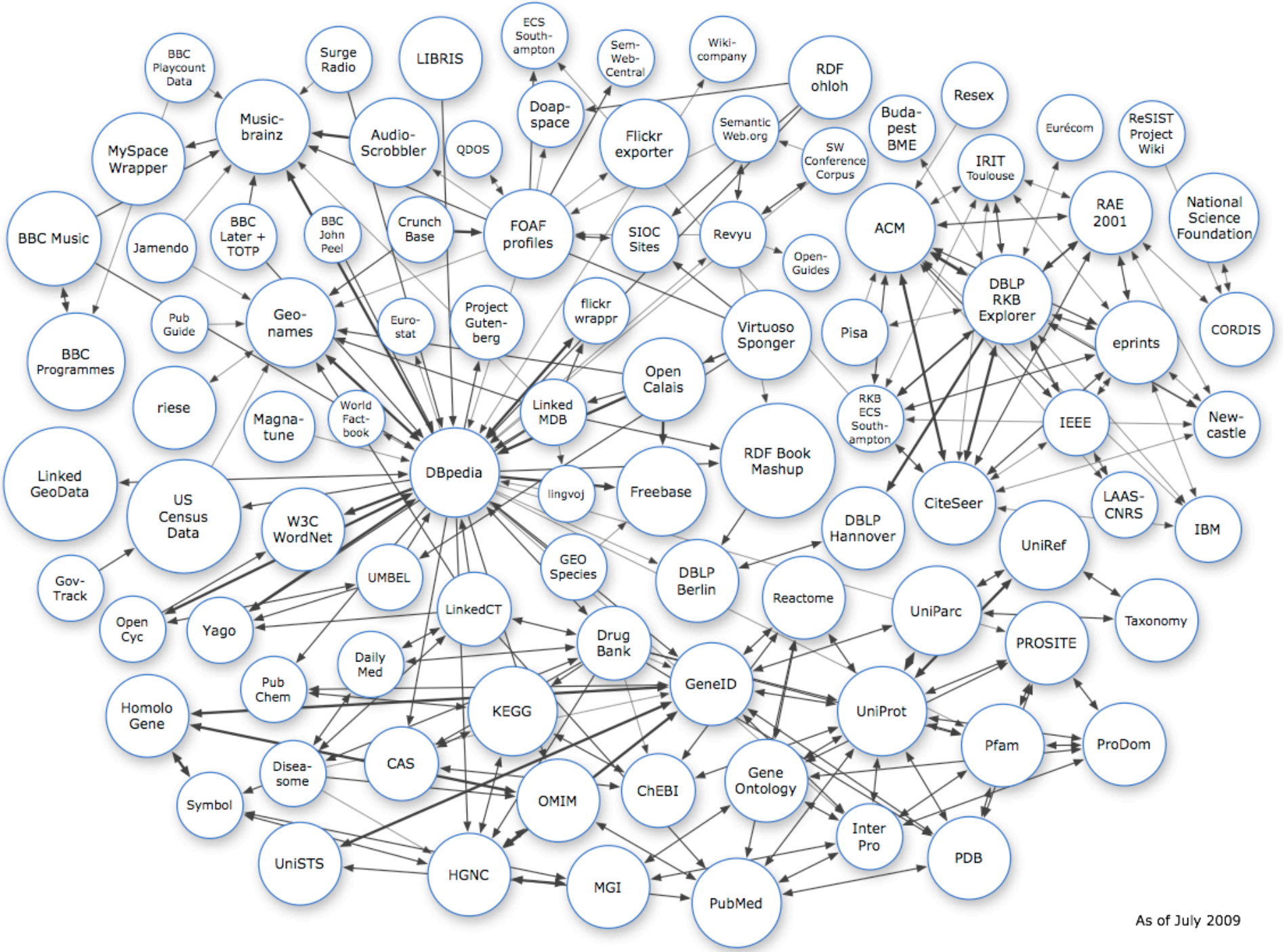
As of September 2008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Surge Radio
LIBRIS
ECS South-ampton
Sem-Web-Central
Wiki-company
RDF ohloh
Resex
Buda-pest BME
Eurécom
ReSIST Project Wiki
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flickr wrappr
Virtuoso Sponger
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BBC Programmes
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Magna-tune
World Fact-book
Linked MDB
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New-castle
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DBpedia
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Freebase
RDF Book Mashup
CiteSeer
LAAS-CNRS
IBM
DBLP Hannover
UniRef
Gov-Track
Open Cyc
Yago
UMBEL
LinkedCT
GEO Species
DBLP Berlin
Reactome
UniParc
Taxonomy
Daily Med
Drug Bank
PROSITE
Pub Chem
GeneID
Homolo Gene
KEGG
UniProt
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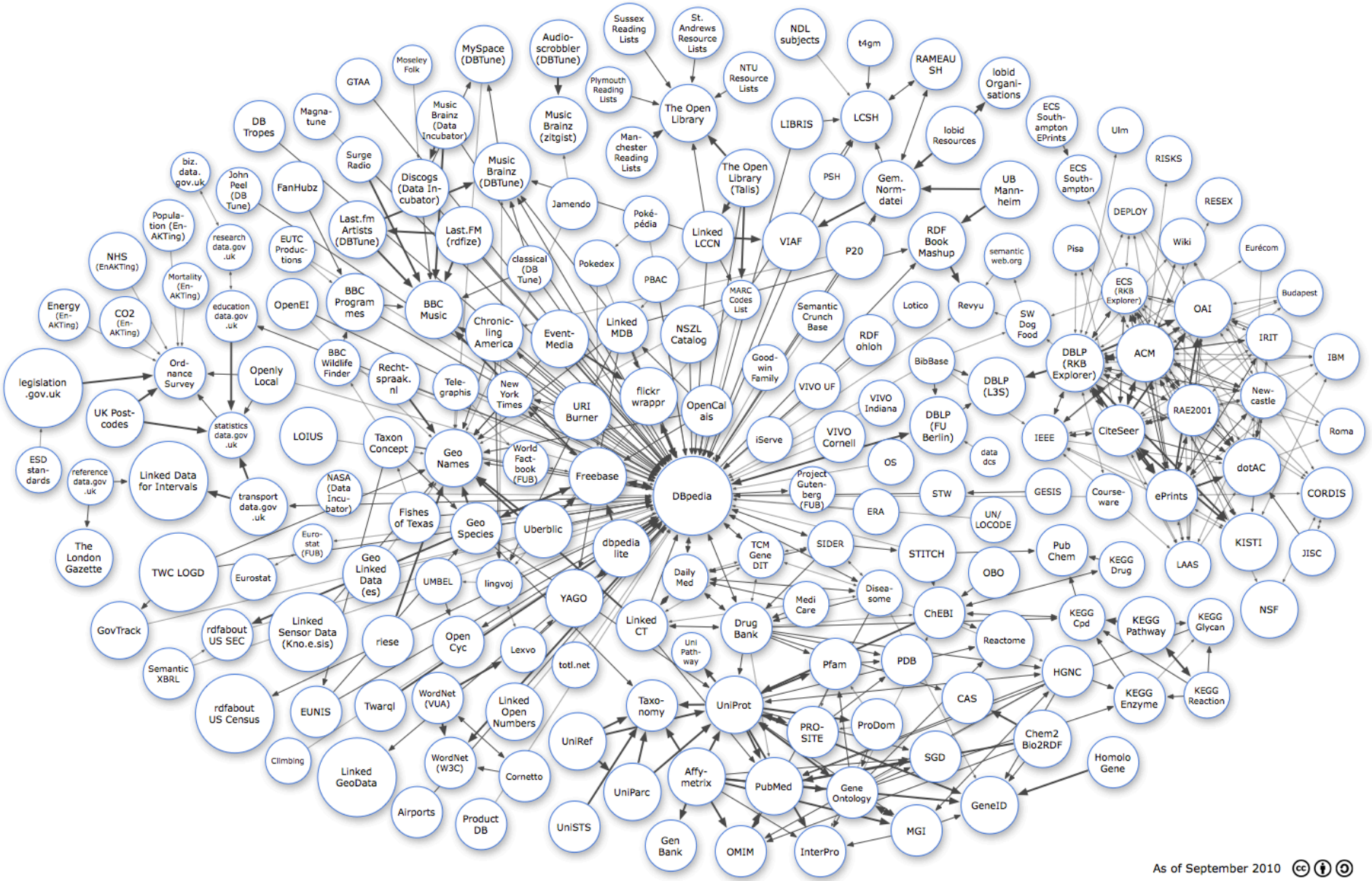
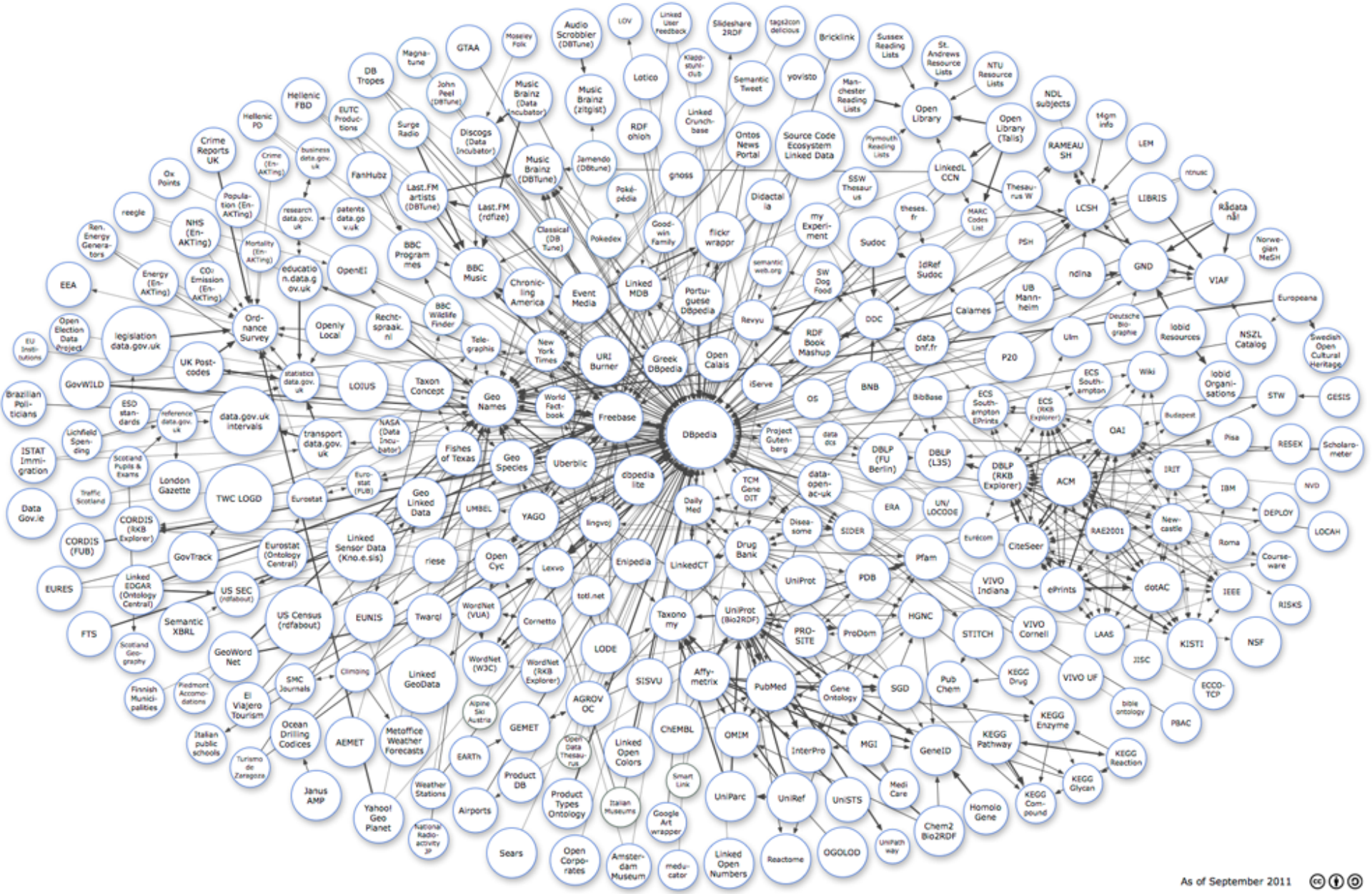
As of July 2009




As of September 2010




As of September 2011

# Why use Linked Data?

- Enormous wealth of open data

- Uniform Resource Identifiers (URIs) enable interconnections between datasets, unlike data in traditional databases

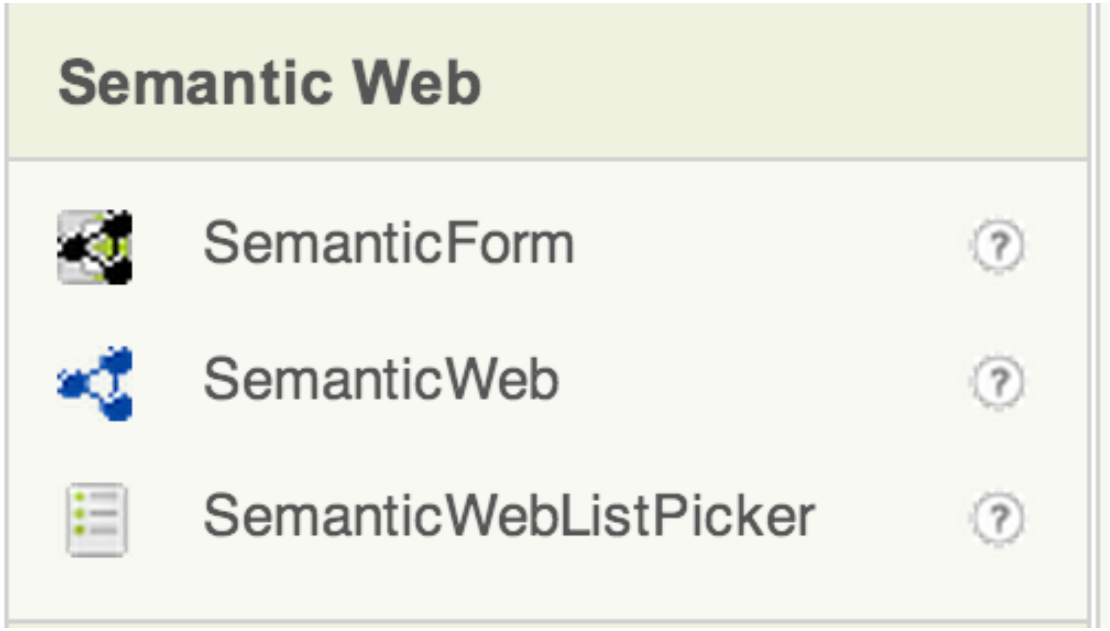
# How to work with linked data?

- To consume:
  - Query using SPARQL
- To produce:
  - Create “triples” and/or “graph” structures using Resource Description Framework (RDF)

# Our goals

- Introduce linked data to App Inventor
- Hide the complexity of RDF, SPARQL when developing mobile apps

# The App Inventor Components

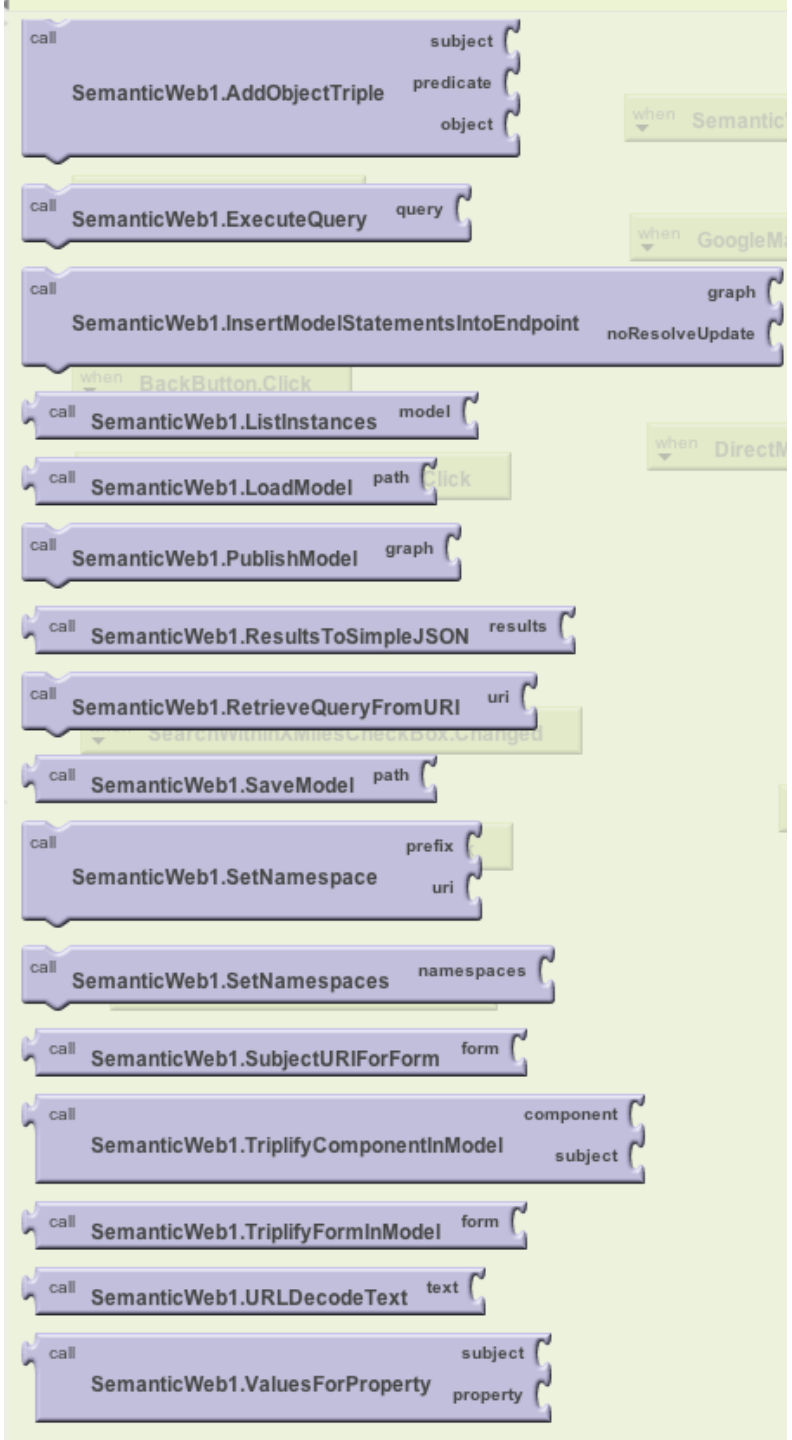


# SemanticForm

- A new app inventor layout
- Creates an RDF model based the contents in the form
- Can create more complex structures with nested forms
- The form can mint new URIs using their contents

# SemanticWeb

- Provides methods for:
  - Reading RDF
  - Storing and manipulating RDF on the device
  - Writing out an RDF model to a triple store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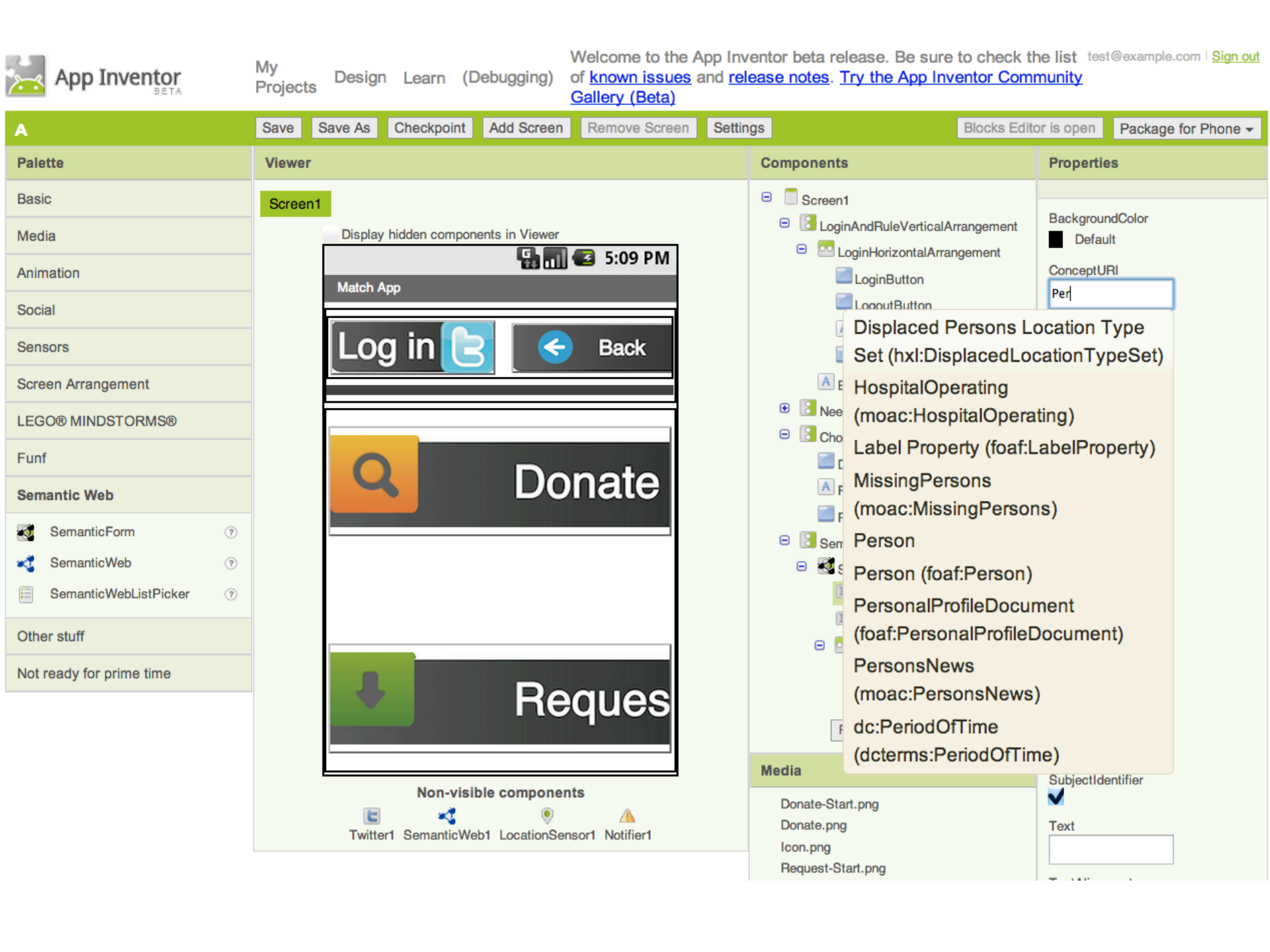
call SemanticWeb1.ListInstances model
call SemanticWeb1.LoadModel path
call SemanticWeb1.PublishModel graph
call SemanticWeb1.ResultsToSimpleJSON results
call SemanticWeb1.RetrieveQueryFromURI uri
call SemanticWeb1.SaveModel path
call SemanticWeb1.SetNamespace prefix uri
call SemanticWeb1.SetNamespaces namespaces
call SemanticWeb1.SubjectURIForForm form
call SemanticWeb1.TriplifyComponentInModel component subject
call SemanticWeb1.TriplifyFormInModel form
call SemanticWeb1.URLDecodeText text
call SemanticWeb1.ValuesForProperty subject property

# SemanticWebListPicker

- Extends the List Picker component
- Auto-populates contents from a triple store


App Inventor BETA
My Projects
Design
Learn
(Debugging)
Welcome to the App Inventor beta release. Be sure to check the list of known issues and release notes. Try the App Inventor Community Gallery (Beta)
test@example.com | Sign out
Save
Save As
Checkpoint
Add Screen
Remove Screen
Settings
Blocks Editor is open
Package for Phone
Palette
Basic
Media
Animation
Social
Sensors
Screen Arrangement
LEGO® MINDSTORMS®
Funf
Semantic Web
SemanticForm
SemanticWeb
SemanticWebListPicker
Other stuff
Not ready for prime time
Viewer
Screen1
Display hidden components in Viewer
5:09 PM
Match App
Log in
Back
Donate
Reques
Non-visible components
Twitter1
SemanticWeb1
LocationSensor1
Notifier1
Components
Screen1
LoginAndRuleVerticalArrangement
LoginHorizontalArrangement
LoginButton
LogoutButton
Displaced Persons Location Type Set (hxl:DisplacedLocationTypeSet)
HospitalOperating (moac:HospitalOperating)
Label Property (foaf:LabelProperty)
MissingPersons (moac:MissingPersons)
Person
Person (foaf:Person)
PersonalProfileDocument (foaf:PersonalProfileDocument)
PersonsNews (moac:PersonsNews)
dc:PeriodOfTime (dcterms:PeriodOfTime)
Media
Donate-Start.png
Donate.png
Icon.png
Request-Start.png
Properties
BackgroundColor
Default
ConceptURI
Per
SubjectIdentifier
Text

# “MatchApp” Demo

- A mobile application that can be easily built using disaster scenarios
- Donors can input information about donations
- People in the disaster areas can search for those resources and request them via Twitter

# Check us out!

Source Code:

https://github.com/mit-dig/appinventor-sources

DIY Mobile App Development for Disaster Management

http://dig.csail.mit.edu/2013/QCRI-DIG-project

# Thank You!