

## Dodavanje eksplicitne semantike sadržajima publikovanim na Web-u (embedded structured data): RDFa i Microdata

- **Google's Structured Data Testing tool** (<http://www.google.com/webmasters/tools/richsnippets>) - omogućuje pregled (strukturiranih) podataka ekstrahovanih iz neke web stranice; pogledati raspoložive primere (muzika, film i sl)
- **Schema.org**: za prethodno razmatrane primere (muzika, recepti, projekti), pogledati korišćene klase i properties definisane u Schema.org
- **Primeri primene:**
  - Semantic search: recipes search (<http://www.google.com/landing/recipes/>)
  - Rich Snippets: npr. prikaz Sourceforge projekata u Google rezultatima – npr., JWNL projekat: <http://sourceforge.net/projects/jwordnet/> - i podaci embedovani u stranicu projekta (na osnovu kojih je prikaz generisan)
- **W3C standardi za umetanje podataka u HTML stranice:**
  - **RDFa:**
    - pogledati primere na: <https://support.google.com/webmasters/answer/146898?hl=en> ili sa <http://rdfa.info/play/>
    - Specifikacija: <http://www.w3.org/TR/xhtml-rdfa-primer/>
  - **Microdata:**
    - pogledati primer na ovoj stranici [https://support.google.com/webmasters/answer/176035?hl=en&ref\\_topic=1088472](https://support.google.com/webmasters/answer/176035?hl=en&ref_topic=1088472) ; jos bolji primeri su na Schema.org, dati uz svaku klasu
    - Specifikacija: <http://dev.w3.org/html5/md/>
- **Vokabulari:**
  - <http://schema.org/> (Google, Yahoo, Bing, Yandex) & <http://schema.rdfs.org/> (RDF version)
  - Prosirenja schema.org vokabulara – otvoren, community-based proces; pregled aktuelnog stanja raspoloziv na: <http://www.w3.org/wiki/WebSchemas/SchemaDotOrgProposals>
    - Primeri integrisanja postojećih vokabulara: rNews (<http://dev.iptc.org/rNews>), GoodRelations
  - GoodRelations (<http://www.heppnetz.de/projects/goodrelations/>)
    - Primer GoodRelations podataka umetnutih u stranice Kmart.com sajta – na primer, stranica za Samsung Galaxy Note ([http://www.kmart.com/shc/s/p\\_10151\\_10104\\_00331972000P](http://www.kmart.com/shc/s/p_10151_10104_00331972000P));
    - Ekstenzije za popularne CMS sisteme; npr., plug-in za Joomla CMS: <http://code.google.com/p/goodrelations-for-joomla/>
    - Integrisan u Schema.org (<http://schema.org/Product> ; <http://schema.org/Offer> ...)
    - Facebook & Open Graph protocol (<http://ogp.me/> ; <https://developers.facebook.com/docs/opengraph/>)

- Google-ovi novi alati vezani za embeded structured data:
  - Structured Data Dashboard (<http://googlewebmastercentral.blogspot.com/2012/07/introducing-structured-data-dashboard.html>)
    - Google is adding support for detecting errors in the structured data (Dec 13, 2013): [http://googlewebmastercentral.blogspot.co.uk/2013/12/structured-data-dashboard-new-markup\\_12.html](http://googlewebmastercentral.blogspot.co.uk/2013/12/structured-data-dashboard-new-markup_12.html)
  - Data Highlighter (<http://support.google.com/webmasters/bin/answer.py?hl=en&answer=2692911>)
  - Structured Data Markup Helper: <https://www.google.com/webmasters/markup-helper/>
  - Video sa Google 2013 IO u kome su svi ovi alati predstavljeni: <https://developers.google.com/events/io/sessions/351340935>
  
- **Dodatni primeri primene:**
  - Google Video search supported by RDFa: <https://developers.google.com/webmasters/videosearch/markups>
  - Drupal 7 (<http://drupal.org/drupal-7.0>) - native support for RDFa
  - BestBuy, Sears, Kmart, ...
    - Za BestBuy pogledati kako opisuju i prodavnice (npr.: <http://stores.bestbuy.com/498/>)
  - Ticketmaster.com, NYT, Rotten Tomatoes, IMDB, Expedia.com
  - Yandex uvodi tzv. interactive snippets:
    - <http://searchenginewatch.com/article/2273626/Yandexs-New-Interactive-Snippets-Allow-Users-to-Take-Actions-From-Search-Results>
    - Keynote talk @ ISWC2013 na temu Microdata, Schema.org, njihovom razvoju, primeni, mogućnostima i sl. : [http://videlectures.net/iswc2013\\_guha\\_tunnel/](http://videlectures.net/iswc2013_guha_tunnel/)

## Integrisanje podataka na Web-u – Linked Data

- Linked Open Data star scheme by example: <http://5stardata.info/> - lepa ilustracija u čemu se sastoji razlika između različitih načina publikovanja podataka i zašto je Linked Data najkorisniji način:
  - 5 Levels abbreviations: OL – Open License; RE – Reusable; OF – Open Format; URI ; LD – Linked Data
  - Obratiti pažnju na razliku između: Data **on** the Web (prva 3 nivoa) i Data **in** the Web (4. i 5. nivo)
- DBpedia (<http://dbpedia.org>)
- Linked Open Data (LOD) Cloud: <http://richard.cyganiak.de/2007/10/lod/>
- Mondeca's LOV (Linked Open Vocabularies): <http://labs.mondeca.com/dataset/lov/index.html>
- Open Government Data: <http://data.gov>, <http://data.gov.uk>, [World Map of Open Government Data Initiatives](#)
  - Inicijative poput OpenSpending (<http://openspending.org/>) orijentisane na razvoj aplikacija/alata koji će omogućiti svim zainteresovanim licima da koriste otvorene podatke