Structured Data - A deep dive into its history, myths, and future

image source: stockcake.com

image source: filmeducatie.nl

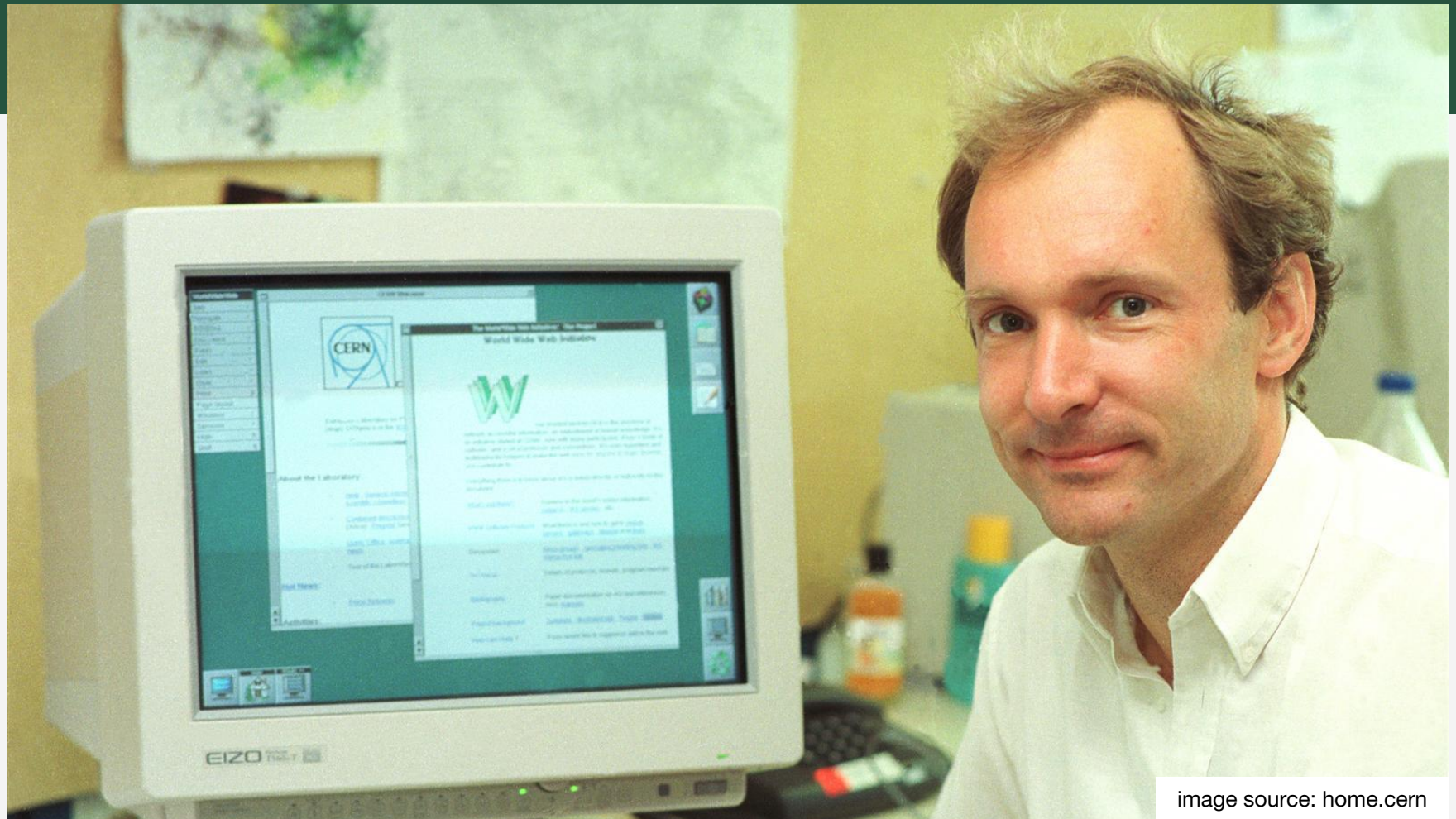

image source: home.cern

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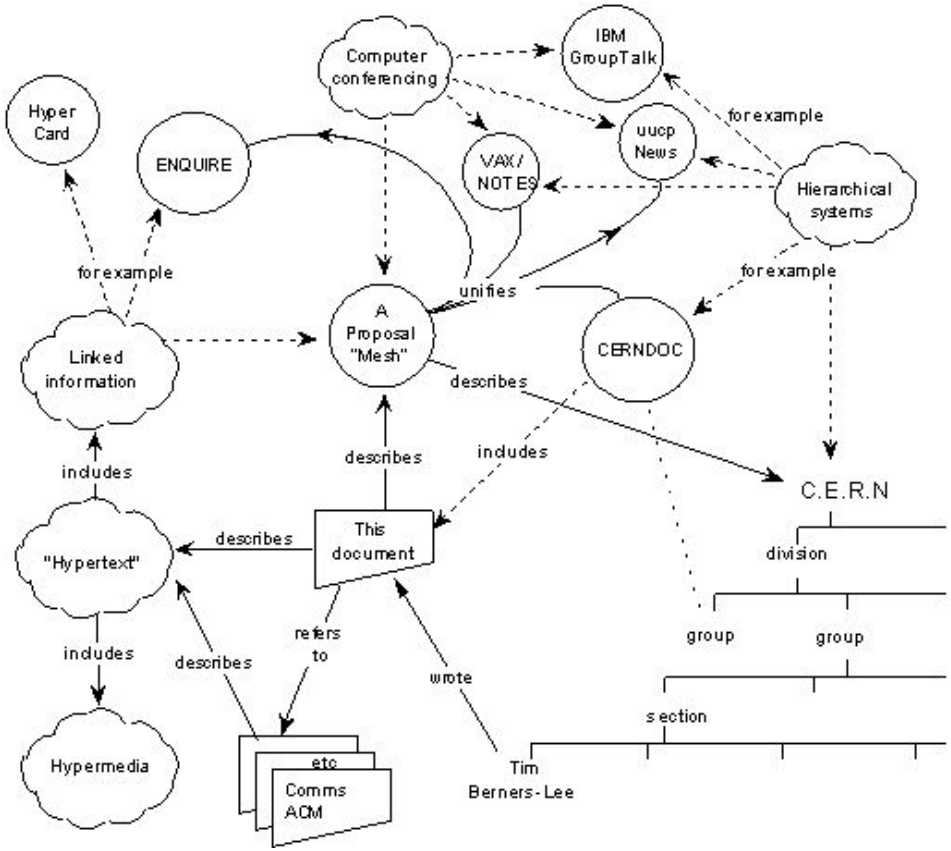


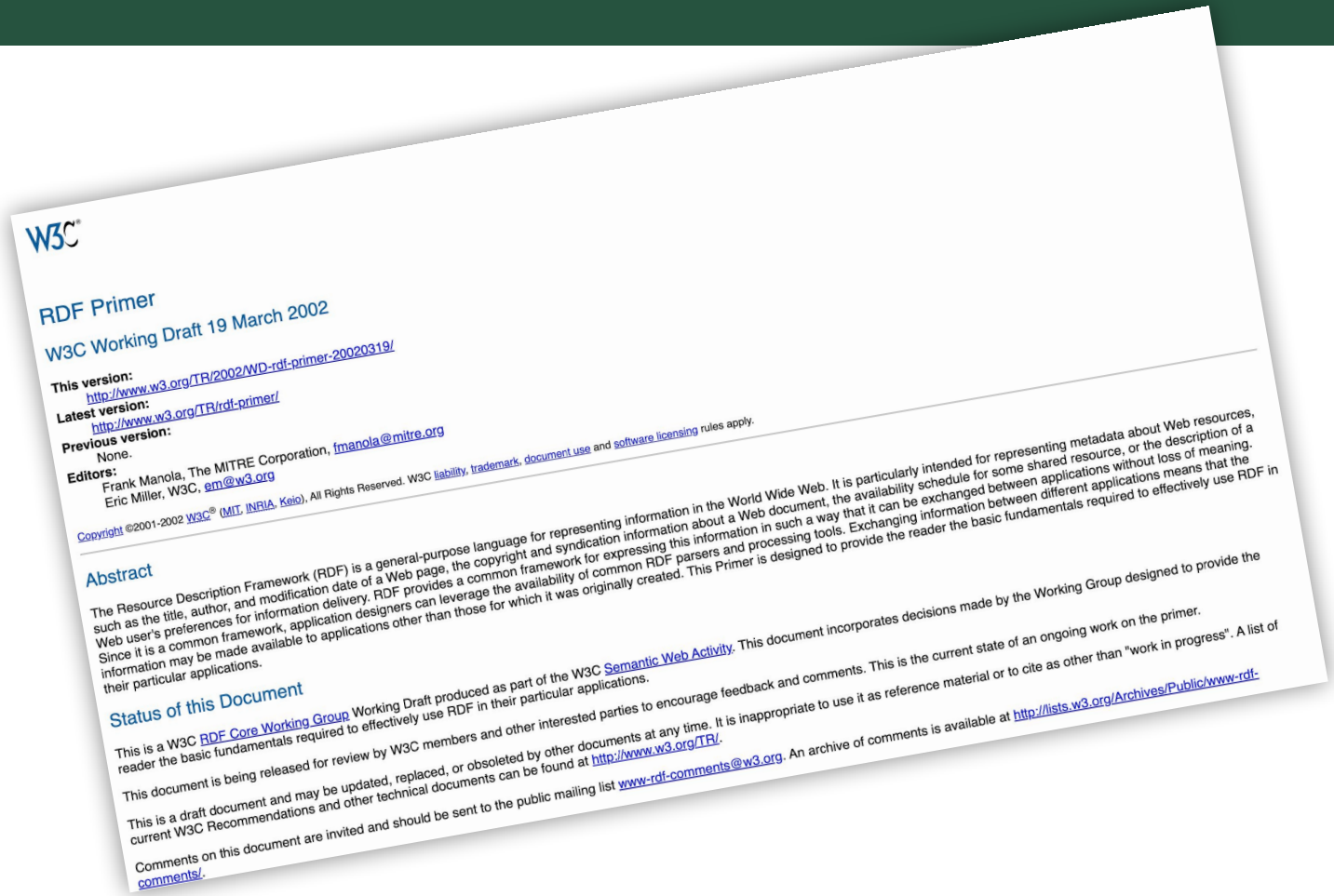
image source: w3.org

image source: cbr.com

Take a spin, now you're in with the techno set.
You're going surfing on the internet.

image source: youtube.com

image source: youtube.com



RDF Primer

W3C Working Draft 19 March 2002

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Latest version:
http://www.w3.org/TR/rdf-primer/
Previous version:
None.
Editors:
Frank Manola, The MITRE Corporation, fmanola@mitre.org
Eric Miller, W3C, em@w3.org

Abstract

The Resource Description Framework (RDF) is a general-purpose language for representing information in the World Wide Web. It is particularly intended for representing metadata about Web resources, such as the title, author, and modification date of a Web page, the copyright and syndication information about a Web document, the availability schedule for some shared resource, or the description of a Web user's preferences for information delivery. RDF provides a common framework for expressing this information in such a way that it can be exchanged between applications without loss of meaning. Since it is a common framework, application designers can leverage the availability of common RDF parsers and processing tools. Exchanging information between different applications means that the information may be made available to applications other than those for which it was originally created. This Primer is designed to provide the reader the basic fundamentals required to effectively use RDF in their particular applications.

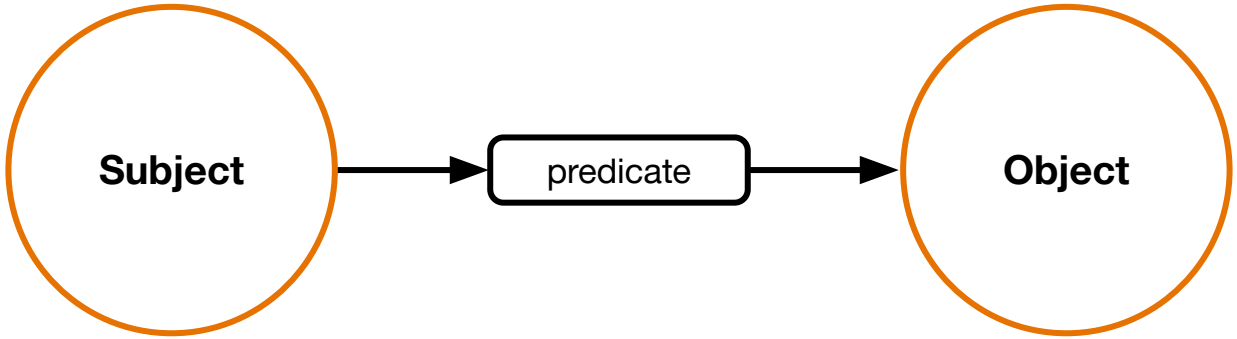
Status of this Document

This is a W3C RDF Core Working Group Working Draft produced as part of the W3C Semantic Web Activity. This document incorporates decisions made by the Working Group designed to provide the reader the basic fundamentals required to effectively use RDF in their particular applications.

This document is being released for review by W3C members and other interested parties to encourage feedback and comments. This is the current state of an ongoing work on the primer.

This is a draft document and may be updated, replaced, or obsoleted by other documents at any time. It is inappropriate to use it as reference material or to cite as other than "work in progress". A list of current W3C Recommendations and other technical documents can be found at http://www.w3.org/TR/.

Comments on this document are invited and should be sent to the public mailing list www-rdf-comments@w3.org. An archive of comments is available at http://lists.w3.org/Archives/Public/www-rdf-comments/.


Subject
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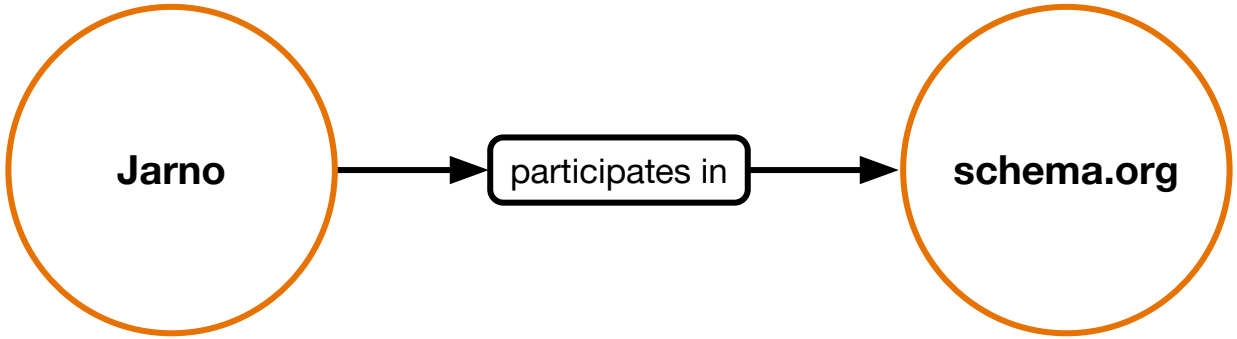
Object


Jarno
participates in
schema.org

```
{
  "@type": "https://schema.org/Action",
  "https://schema.org/name": "participates in",
  "https://schema.org/agent": "Jarno",
  "https://schema.org/object": "schema.org"
}
```

RDF Site Summary (RSS) 1.0

Abstract

RDF Site Summary (RSS) is a lightweight multipurpose extensible metadata description and syndication format. RSS is an XML application, conforms to the W3C's RDF Specification and is extensible via XML-namespace and/or RDF based modularization.

Authors

The members of the RSS-DEV Working Group:

Gabe Beged-Dov, JFinity Systems LLC
Dan Brickley, ILRT
Rael Dornfest, O'Reilly & Associates
Ian Davis, Calaba, Ltd.
Leigh Dodds, xmlhack
Jonathan Eisenzopf, Whirlwind Interactive
David Galbraith, Moreover.com
R.V. Guha, guha.com
Ken MacLeod, (Independent)
Eric Miller, Online Computer Library Center, Inc.
Aaron Swartz, The Info Network
Eric van der Vlist, Dyomedea

Version

Latest Version: http://purl.org/rss/1.0/spec

1.3.4 2001-05-30 Fixed small typo in section 5.3.6 (a
1.3.3 2001-03-20 Updated mime-type and URI (as, a
1.3.2 2000-12-19 (Changed style and tidied markup;
1.3.1 2000-12-17 (Typo correction: An upper limit of
1.3 2000-12-09

Status

Release

Comments should be directed to the RSS-DEV mailin

Rights

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N-Triples

Revision: 1.8

1. Introduction

N-Triples is a line-based, plain text format

Test cases in N-Triples can be found linke

This format was designed to be a fixed su
format when invoked as "cwm -triples".

It is recommended, but not required, that

The Internet Media Type / MIME Type of

2. Extended Backus-Naur

An N-Triples document is a sequence of U
the subject, predicate and object terms. T

This EBNF is the notation used in XML 1.

W3C®

RDF Primer — Turtle version

W3C Note in Development @@@Date@@@

— This is a first draft of a document that *might* have become an interest group note. Up until now, however, the document never got the sufficient momentum to be published, so it should be considered even less than a draft. It is kept here mainly for historical reasons...—

This version:
http://www.w3.org/2007/02/turtle/primer/
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http://www.w3.org/2007/02/turtle/primer/
Previous version:
http://www.w3.org/2007/02/turtle/primer/
Editors:
(Original, RDF/XML version): Frank Manola, fmanola@acm.org
(Original, RDF/XML version): Eric Miller, W3C, em@w3.org
David Beckett, dave@dajobe.org
Ivan Herman, ivan@w3.org

Abstract

The Resource Description Framework (RDF) is a language for representing information about resources in the World Wide Web. This Primer is designed to provide the reader with the basic knowledge required to effectively use RDF. It describes how to define RDF vocabularies using the RDF Vocabulary Description Language. It introduces the basic concepts of RDF and describes its Turtle serialization syntax.

The original version of this Primer[RDF_PRIMER] was part of the RDF Recommendation published in February 2004, was based on the RDF/XML serialization syntax of RDF. The text of the original primer has been adapted to Turtle for the purpose of this document, and some of the application examples (that were defined by external bodies in terms of RDF/XML) have been removed.

Status of this Document

This section describes the status of this document at the time of its publication. Other documents may supersede this document. A list of current W3C publications and the latest revision of this technical report can be found in the W3C technical reports index at http://www.w3.org/TR/.

This document is an Interest Group Note, developed by the Semantic Web Interest Group.

Resource Description Framework (RDF) Schema Specification

W3C Proposed Recommendation 03 Mar

This Version:
http://www.w3.org/TR/1999/PR-rdf-schema-
Newest Version:
http://www.w3.org/TR/PR-rdf-schema
Editors:
Dan Brickley, University of Bristol
R.V. Guha, Netscape

Document Status and errata
Acknowledgments

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Status of this document

This document is a Proposed Recommendation
archive of public comments is available at http://w

This specification is a revision of the last-call work
detailed differences are available for reviewers to

The Working Group anticipates no further substar

Publication as a Proposed Recommendation does
is inappropriate to cite W3C Drafts as other than

The Resource Description Framework is part of th
descriptions of resources on the Web. A separate

Note: The HTML source of this document contain
future W3C work.

Table of Contents

OWL 2 Web Ontology Language: Primer

W3C Working Draft 11 April 2008

This version:
http://www.w3.org/TR/2008/WD-owl2-prim
Latest version:
http://www.w3.org/TR/owl2-primer/
Authors:
Bijan Parsia, University of Manchester
Peter F. Patel-Schneider, Bell Labs Resea

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Abstract

OWL 2 extends the W3C OWL Web Ontology L
tool developers are willing to support. The new
extended annotations.
This short primer provides an approachable intr
information and then more complex information

Status of this Document

May Be Superseded

This section describes the status of this docum
report can be found in the W3C technical repor

Set of Documents

This document is being published as one of a s

1. Structural Specification and Functional-St

SKOS Simple Knowledge Organization System Reference

W3C Working Draft 25 January 2008

This version:
http://www.w3.org/TR/2008/WD-skos-reference-20080125/
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Alistair Miles, STFC Rutherford Appleton Laboratory / University of Oxford
Sean Bechhofer, University of Manchester

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Abstract

This document defines the Simple Knowledge Organization System (SKOS), a common data model for sharing and linking knowledge organization systems via the Semantic Web.

Many knowledge organization systems, such as thesauri, taxonomies, classification schemes and subject heading systems, share a similar structure, and are used in similar applications. SKOS captures much of this similarity and makes it explicit, to enable data and technology sharing across diverse applications.

The SKOS data model provides a standard, low-cost migration path for porting existing knowledge organization systems to the Semantic Web. SKOS also provides a light weight, intuitive language for developing and sharing new knowledge organization systems. It may be used on its own, or in combination with formal knowledge representation languages such as the Web Ontology language (OWL).

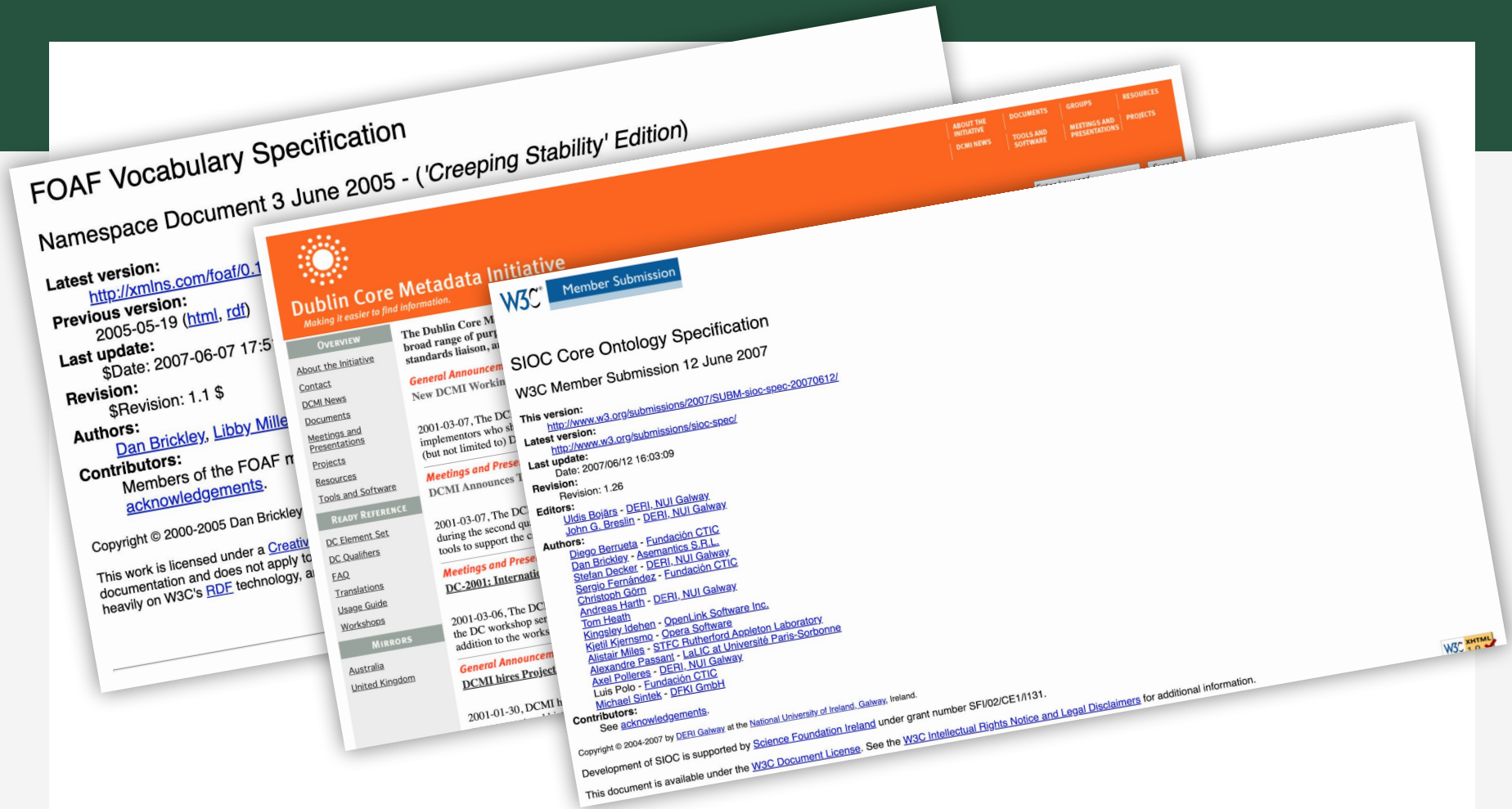
This document is the normative specification of the Simple Knowledge Organization System. It is intended for readers who are involved in the design and implementation of information systems, and who already have a good understanding of Semantic Web technology, especially RDF and OWL.

For an informative guide to using SKOS, see the upcoming SKOS Primer.

Synopsis

Using SKOS, **conceptual resources** can be identified using URIs, **labeled** with lexical strings in one or more natural languages, **documented** with various types of note, **linked to each other** and organized into informal hierarchies and association networks, aggregated into **concept schemes**, and **mapped** to conceptual resources in other schemes. In addition, **labels can be related** to each other, and conceptual resources can be **grouped** into labeled and/or ordered collections.

[show quick access panel]


FOAF Vocabulary Specification
Namespace Document 3 June 2005 - ('Creeping Stability' Edition)
Latest version:
http://xmlns.com/foaf/0.1
Previous version:
2005-05-19 (html, rdf)
Last update:
$Date: 2007-06-07 17:5
Revision:
$Revision: 1.1 $
Authors:
Dan Brickley, Libby Mille
Contributors:
Members of the FOAF
acknowledgements.
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documentation and does not apply to
heavily on W3C's RDF technology, a
Dublin Core Metadata Initiative
Making it easier to find information.
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GROUPS
MEETINGS AND PRESENTATIONS
RESOURCES
PROJECTS
OVERVIEW
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Documents
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Projects
Resources
Tools and Software
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2001-01-30, DCMI h
W3C Member Submission
SIOC Core Ontology Specification
W3C Member Submission 12 June 2007
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Revision:
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Uldis Bojārs - DERI, NUI Galway
John G. Breslin - DERI, NUI Galway
Authors:
Diego Berrueta - Fundación CTIC
Dan Brickley - Asemantics S.R.L.
Stefan Decker - DERI, NUI Galway
Sergio Fernández - Fundación CTIC
Christoph Görn
Andreas Harth - DERI, NUI Galway
Tom Heath
Kingsley Idehen - OpenLink Software Inc.
Kjetil Kjernsmo - Opera Software
Alistair Miles - STFC Rutherford Appleton Laboratory
Alexandre Passant - LaLIC at Université Paris-Sorbonne
Axel Polleres - DERI, NUI Galway
Luis Polo - Fundación CTIC
Michael Sintek - DFKI GmbH
Contributors:
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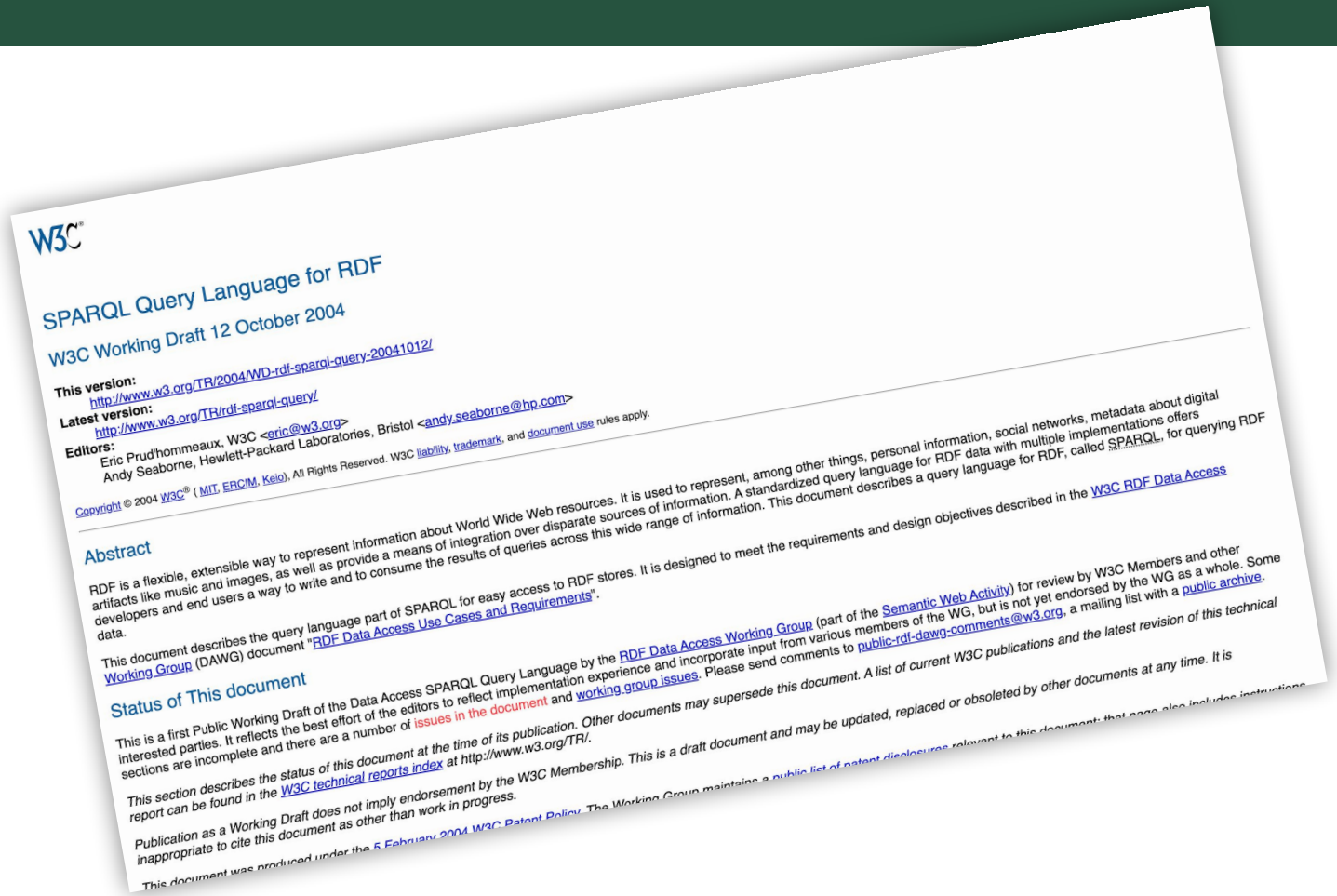

SPARQL Query Language for RDF

W3C Working Draft 12 October 2004

This version:
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http://www.w3.org/TR/rdf-sparql-query/
Editors:
Eric Prud'hommeaux, W3C <eric@w3.org>
Andy Seaborne, Hewlett-Packard Laboratories, Bristol <andy.seaborne@hp.com>

Abstract

RDF is a flexible, extensible way to represent information about World Wide Web resources. It is used to represent, among other things, personal information, social networks, metadata about digital artifacts like music and images, as well as provide a means of integration over disparate sources of information. A standardized query language for RDF data with multiple implementations offers developers and end users a way to write and to consume the results of queries across this wide range of information. This document describes a query language for RDF, called SPARQL, for querying RDF data.

This document describes the query language part of SPARQL for easy access to RDF stores. It is designed to meet the requirements and design objectives described in the W3C RDF Data Access Working Group (DAWG) document "RDF Data Access Use Cases and Requirements".

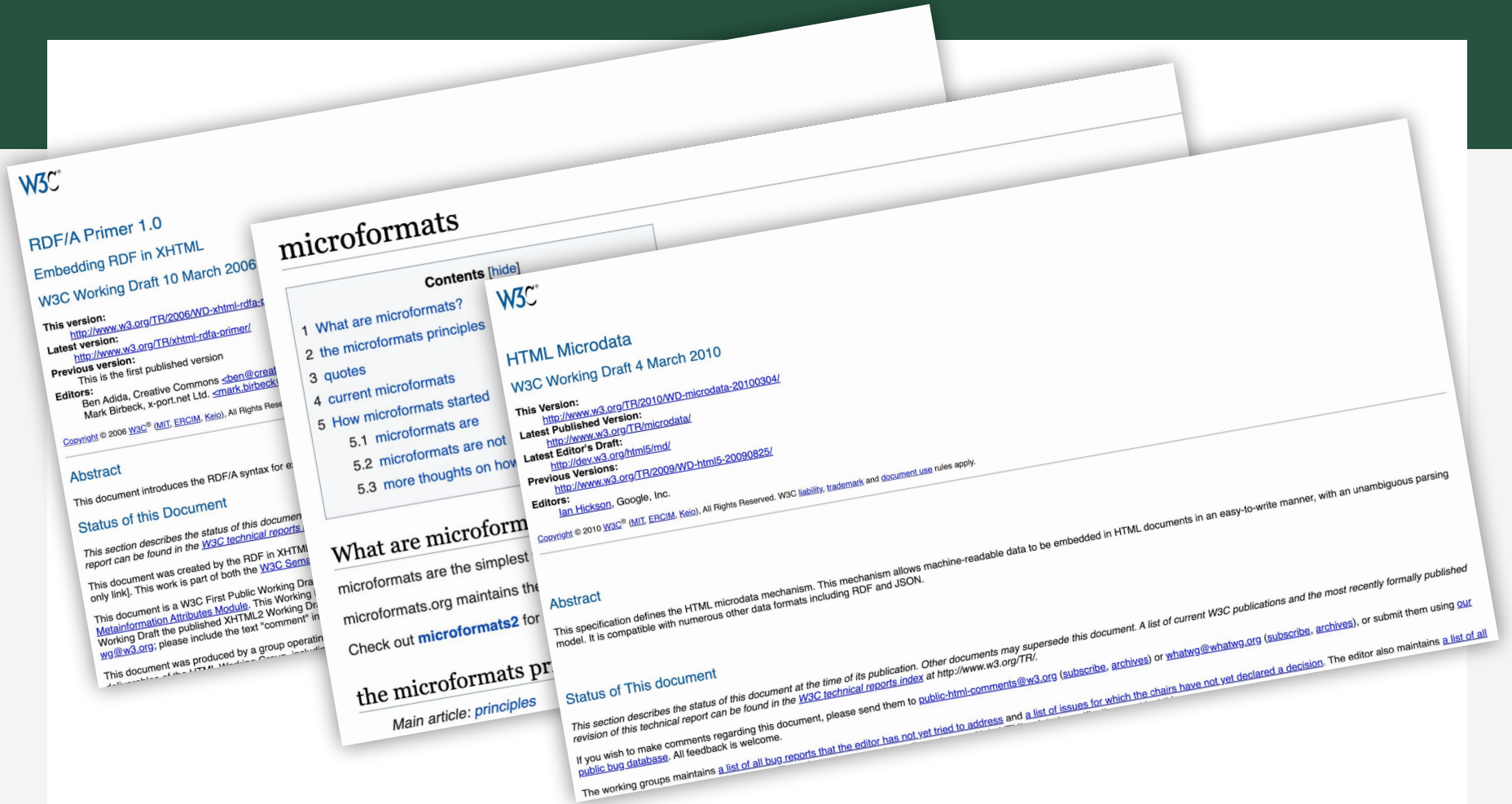
Status of This document

This is a first Public Working Draft of the Data Access SPARQL Query Language by the RDF Data Access Working Group (part of the Semantic Web Activity) for review by W3C Members and other interested parties. It reflects the best effort of the editors to reflect implementation experience and incorporate input from various members of the WG, but is not yet endorsed by the WG as a whole. Some sections are incomplete and there are a number of issues in the document and working.group issues. Please send comments to public-rdf-dawg-comments@w3.org, a mailing list with a public archive.

This section describes the status of this document at the time of its publication. Other documents may supersede this document. A list of current W3C publications and the latest revision of this technical report can be found in the W3C technical reports index at http://www.w3.org/TR/.

Publication as a Working Draft does not imply endorsement by the W3C Membership. This is a draft document and may be updated, replaced or obsoleted by other documents at any time. It is inappropriate to cite this document as other than work in progress.

This document was produced under the 5 February 2004 W3C Patent Policy. The Working Group maintains a public list of patent disclosures relevant to this document; that page also includes instructions



RDF/A Primer 1.0

Embedding RDF in XHTML

W3C Working Draft 10 March 2006

This version:
http://www.w3.org/TR/2006/WD-xhtml-rdfa-
Latest version:
http://www.w3.org/TR/xhtml-rdfa-primer/
Previous version:
This is the first published version
Editors:
Ben Adida, Creative Commons <ben@creat
Mark Birbeck, x-port.net Ltd. <mark.birbeck

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Abstract

This document introduces the RDF/A syntax for e

Status of this Document

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report can be found in the W3C technical reports

This document was created by the RDF in XHTML
only link]. This work is part of both the W3C Sema

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Working Draft the published XHTML2 Working Dr
wg@w3.org; please include the text "comment" in

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microformats

Contents [hide]

1 What are microformats?
2 the microformats principles
3 quotes
4 current microformats
5 How microformats started
5.1 microformats are
5.2 microformats are not
5.3 more thoughts on how

What are microform

microformats are the simplest

microformats.org maintains the

Check out **microformats2** for

the microformats pr

Main article: principles

HTML Microdata

W3C Working Draft 4 March 2010

This Version:
http://www.w3.org/TR/2010/WD-microdata-20100304/
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Latest Editor's Draft:
http://dev.w3.org/html5/md/
Previous Versions:
http://www.w3.org/TR/2009/WD-html5-20090825/
Editors:
Ian Hickson, Google, Inc.

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Abstract

This specification defines the HTML microdata mechanism. This mechanism allows machine-readable data to be embedded in HTML documents in an easy-to-write manner, with an unambiguous parsing model. It is compatible with numerous other data formats including RDF and JSON.

Status of This document

This section describes the status of this document at the time of its publication. Other documents may supersede this document. A list of current W3C publications and the most recently formally published revision of this technical report can be found in the W3C technical reports index at http://www.w3.org/TR/.

If you wish to make comments regarding this document, please send them to public-html-comments@w3.org (subscribe, archives) or whatwg@whatwg.org (subscribe, archives), or submit them using our public bug database. All feedback is welcome.

The working groups maintains a list of all bug reports that the editor has not yet tried to address and a list of issues for which the chairs have not yet declared a decision. The editor also maintains a list of all

image source: wearespotlightmusic.com

Yahoo SearchMonkey *based on structured resources*

Google Rich Snippets *based on microformats and RDFa*


```
<div class="hreview-aggregate">
  <div class="item vcard">
    <h1 class="fn org">Drooling Dog Bar B Q</h1>
    ...
    <img class="stars_4 rating average" src="stars_map.png" alt="4 star rating" />
    <em>based on <span class="count">15</span> reviews</em>
    ...
    <strong>Price range:</strong> <span class="pricerange">$$</span>
  </div>
</div>
```

```
<div xmlns:v="http://rdf.data-vocabulary.org/#" typeof="v:Review-aggregate">
  <div rel="v:itemreviewed">
    <span typeof="v:Organization">
      <h1 property="v:name">Drooling Dog Bar B Q</h1>
      ...
      <img rel="v:rating" class="stars_4" src="stars_map.png" alt="4 star rating" />
      <em>based on <span property="v:count">15</span> reviews</em>
      ...
      <strong>Price Range:</strong> <span property="v:pricerange">$$</span>
    </span>
  </div>
</div>
```

Bing Tiles *based on microformats and structured resources*

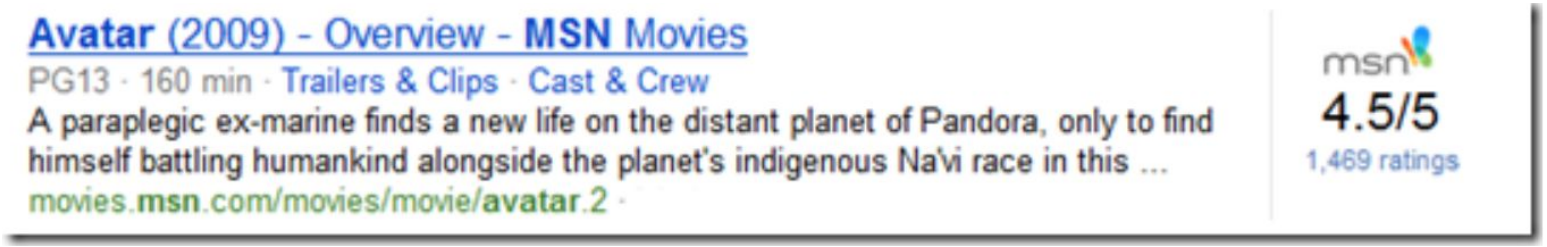

image source: imgflip.com

What is Schema.org?

This site provides a collection of schemas, i.e., html tags, that webmasters can use to markup their pages in ways recognized by major search providers. Search engines including Bing, Google and Yahoo! rely on this markup to improve the display of search results, making it easier for people to find the right web pages.

Many sites are generated from structured data, which is often stored in databases. When this data is formatted into HTML, it becomes very difficult to recover the original structured data. Many applications, especially search engines, can benefit greatly from direct access to this structured data. On-page markup enables search engines to understand the information on web pages and provide richer search results in order to make it easier for users to find relevant information on the web. Markup can also enable new tools and applications that make use of the structure.

A shared markup vocabulary makes easier for webmasters to decide on a markup schema and get the maximum benefit for their efforts. So, in the spirit of sitemaps.org, Bing, Google and Yahoo! have come together to provide a shared collection of schemas that webmasters can use.

We invite you to get started!


YAHOO! SEARCH BLOG
Search
home | subscribe | help
back to yahoo! search
Introducing schema.org: A Collaboration on Structured Data
Posted June 2nd, 2011 at 11:50 am by
Categories: Search
Today we're announcing schema.org, a new initiative from Yahoo!, Bing, and Google, to create and support a common set of schemas for structured data markup on web pages. With schema.org, webmasters and developers can learn about structured data and improve how their sites appear in search results on Bing, Google, and Yahoo!. Information and tips are available on schema.org, a one-stop resource for webmasters looking to add markup to make their pages better understood by search engines.
In
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Y! Alerts
Twitter
RSS
Facebook Fans
Yahoo Search on Facebook
SEARCH
Like
76,565 people like Yahoo Search.
Kamal
Travis
Malike
Haji Baba
Search
wea
weather
weather channel
weather underground
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yahoo weather
national weather service
WEATHER SUNNYVALE, CA
TODAY
Rain
MONDAY
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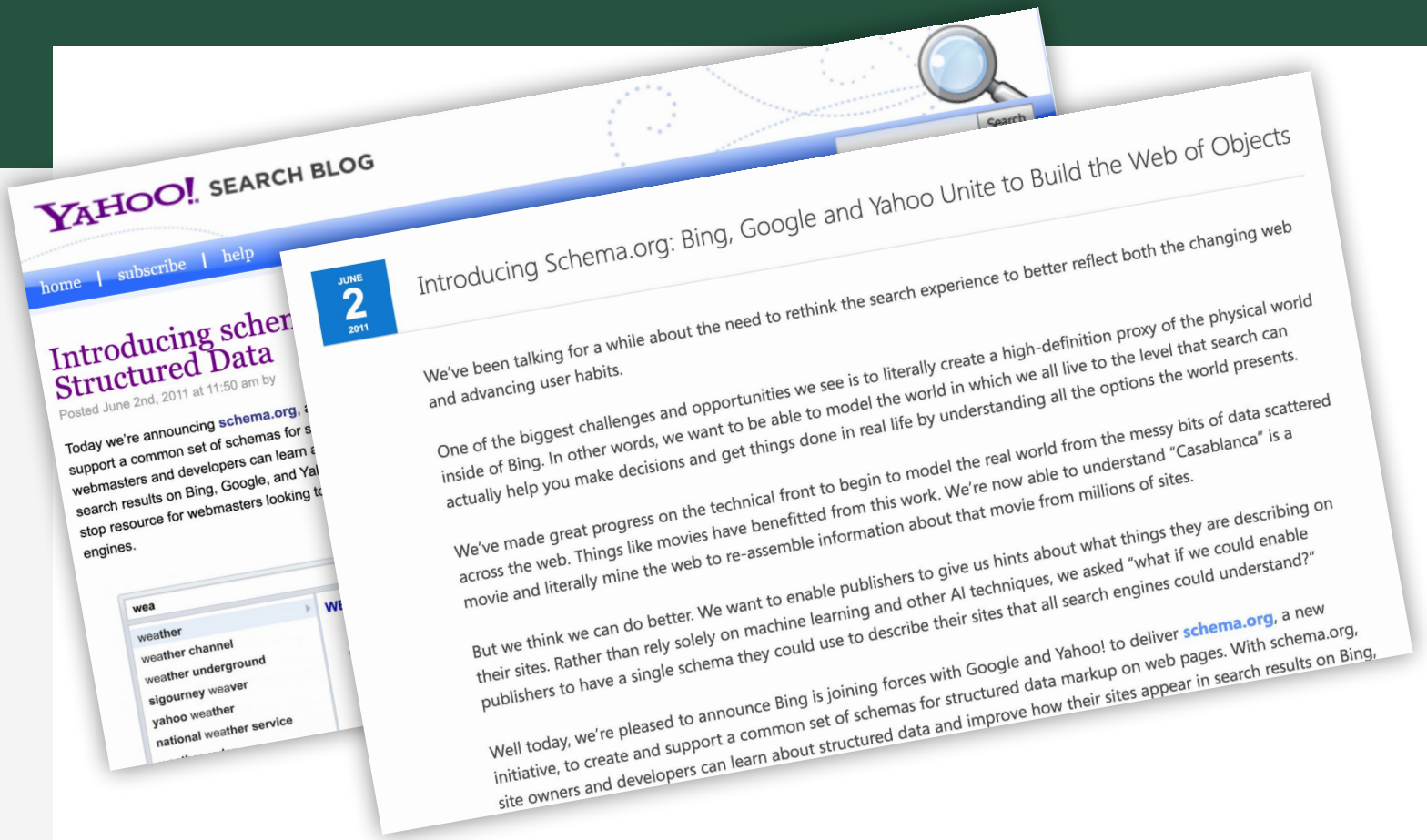
TUESDAY
Rain/Wind


YAHOO! SEARCH BLOG
home | subscribe | help
Introducing scher
Structured Data
Posted June 2nd, 2011 at 11:50 am by
Today we're announcing schema.org,
support a common set of schemas for s
webmasters and developers can learn a
search results on Bing, Google, and Yal
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yahoo weather
national weather service
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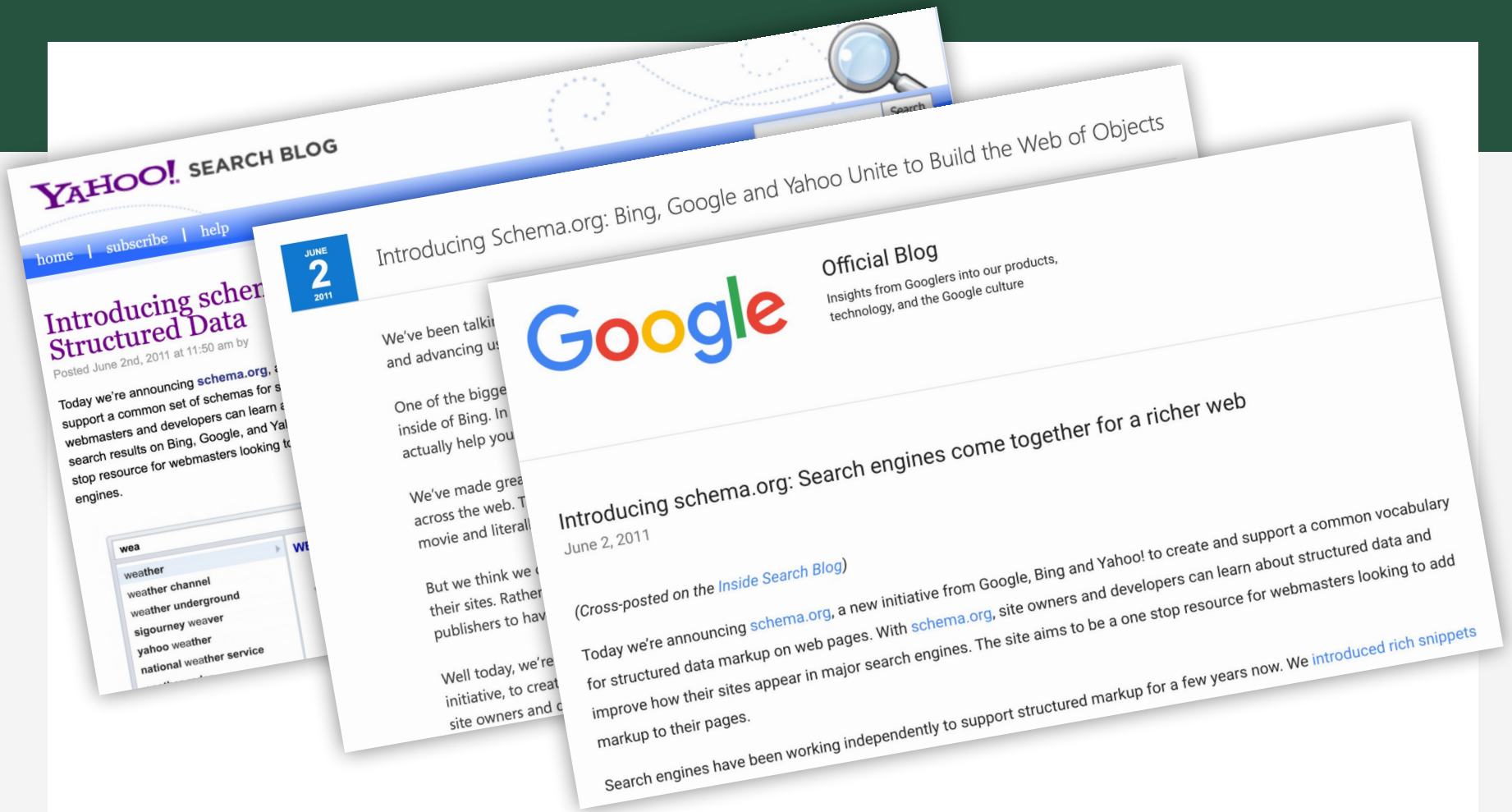
Introducing Schema.org: Bing, Google and Yahoo Unite to Build the Web of Objects
We've been talking for a while about the need to rethink the search experience to better reflect both the changing web and advancing user habits.
One of the biggest challenges and opportunities we see is to literally create a high-definition proxy of the physical world inside of Bing. In other words, we want to be able to model the world in which we all live to the level that search can actually help you make decisions and get things done in real life by understanding all the options the world presents.
We've made great progress on the technical front to begin to model the real world from the messy bits of data scattered across the web. Things like movies have benefitted from this work. We're now able to understand "Casablanca" is a movie and literally mine the web to re-assemble information about that movie from millions of sites.
But we think we can do better. We want to enable publishers to give us hints about what things they are describing on their sites. Rather than rely solely on machine learning and other AI techniques, we asked "what if we could enable publishers to have a single schema they could use to describe their sites that all search engines could understand?"
Well today, we're pleased to announce Bing is joining forces with Google and Yahoo! to deliver schema.org, a new initiative, to create and support a common set of schemas for structured data markup on web pages. With schema.org, site owners and developers can learn about structured data and improve how their sites appear in search results on Bing,


YAHOO! SEARCH BLOG
home | subscribe | help
Introducing schem
Structured Data
Posted June 2nd, 2011 at 11:50 am by
Today we're announcing schema.org,
support a common set of schemas for s
webmasters and developers can learn a
search results on Bing, Google, and Ya
stop resource for webmasters looking t
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publishers to hav
Well today, we're
initiative, to creat
site owners and
Google
Official Blog
Insights from Googlers into our products, technology, and the Google culture
Introducing schema.org: Search engines come together for a richer web
June 2, 2011
(Cross-posted on the Inside Search Blog)
Today we're announcing schema.org, a new initiative from Google, Bing and Yahoo! to create and support a common vocabulary for structured data markup on web pages. With schema.org, site owners and developers can learn about structured data and improve how their sites appear in major search engines. The site aims to be a one stop resource for webmasters looking to add markup to their pages.
Search engines have been working independently to support structured markup for a few years now. We introduced rich snippets

schema blog

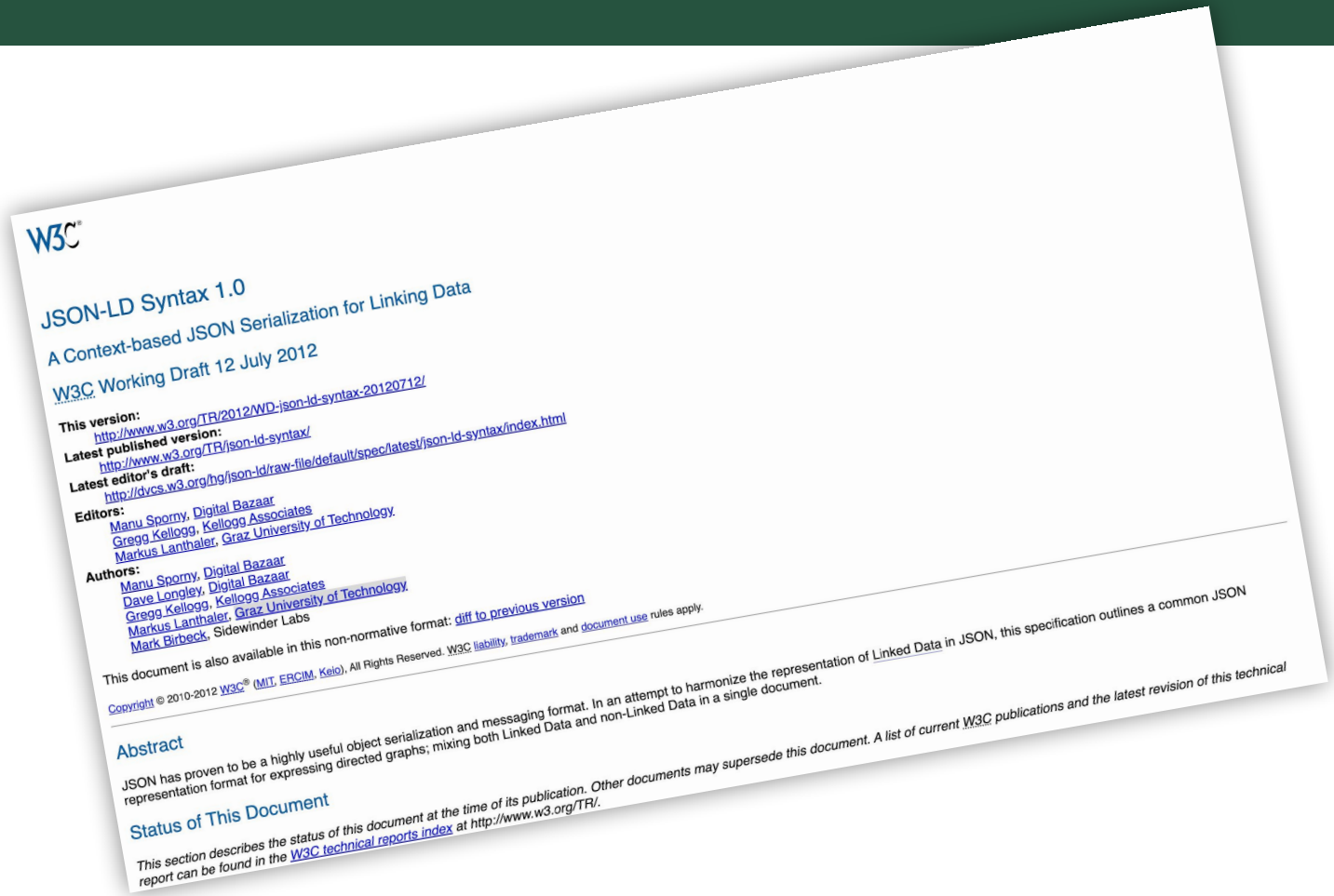
Official blog for schema.org

FRIDAY, NOVEMBER 4, 2011

Yandex now supports schema.org markup

One of the primary goals in creating schema.org was to simplify structured data markup requirements for content creators across search engines, which we hope will drive greater adoption across the Web. In that vein, we're very happy that Yandex has announced its support for schema.org. In addition to being a major consumer of schema.org markup, Yandex will be increasingly contributing to discussions about the evolution of the schema on the W3C-hosted Web Schemas group, and they are also investigating translation of the schema.org website to local languages. It's great to have growing support for the schema.org markup around the world!

Posted by danbri at 10:46 AM



JSON-LD Syntax 1.0

A Context-based JSON Serialization for Linking Data

W3C Working Draft 12 July 2012

This version:
http://www.w3.org/TR/2012/WD-json-ld-syntax-20120712/
Latest published version:
http://www.w3.org/TR/json-ld-syntax/
Latest editor's draft:
http://dvcs.w3.org/hg/json-ld/raw-file/default/spec/latest/json-ld-syntax/index.html
Editors:
Manu Sporny, Digital Bazaar
Gregg Kellogg, Kellogg Associates
Markus Lanthaler, Graz University of Technology
Authors:
Manu Sporny, Digital Bazaar
Dave Longley, Digital Bazaar
Gregg Kellogg, Kellogg Associates
Markus Lanthaler, Graz University of Technology
Mark Birbeck, Sidewinder Labs

This document is also available in this non-normative format: diff to previous version

Abstract

JSON has proven to be a highly useful object serialization and messaging format. In an attempt to harmonize the representation of Linked Data in JSON, this specification outlines a common JSON representation format for expressing directed graphs; mixing both Linked Data and non-Linked Data in a single document.

Status of This Document

This section describes the status of this document at the time of its publication. Other documents may supersede this document. A list of current W3C publications and the latest revision of this technical report can be found in the W3C technical reports index at http://www.w3.org/TR/.


May 2012, things, not strings

MARCH 21 2013

Understand Your World with Bing

At Bing we believe that search should be more than a collection of blue links pointing to pages around the web. We believe search should also be a reflection of the actual world which is why last June, we introduced a feature called Snapshot, which enables answers at a glance in the center column of the search results page. The result is a richer set of search results to help you better understand and explore the real world. We started with movies, restaurants and hotels.

The underlying technology for Snapshot is designed to develop deep understanding of the world around us not only as a collection of entities (people, places and things) but also the relationships between those entities. Inside the Bing engineering team, we call this technology Satori, which means *understanding* in Japanese. Over time, Satori will continue growing to encompass billions of entities and relationships, providing searchers with a more useful model of the digital and physical world.

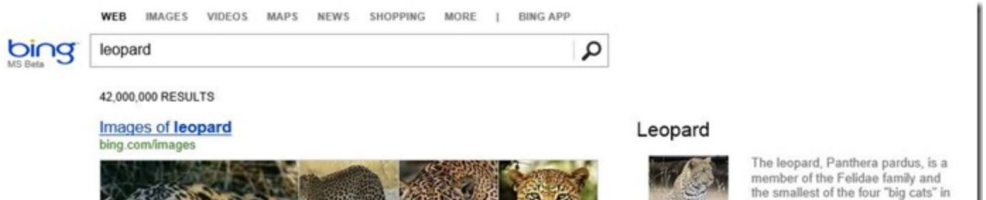


image source: wdwinfo.com

image source: intanibase.com


yahoo
Яндекс
Microsoft Bing
Google

Яндекс

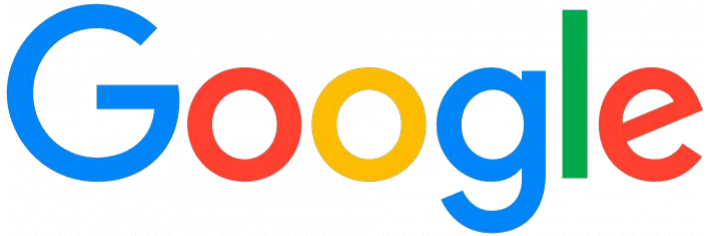
Microsoft Bing

Google


yahoo!

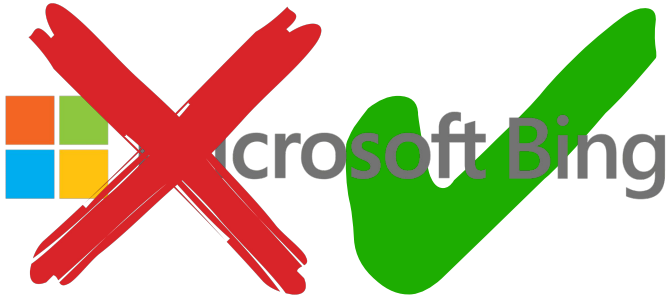

Яндекс

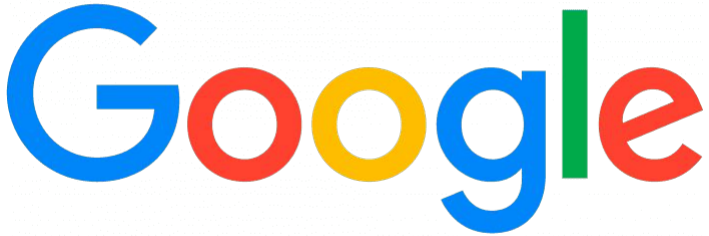

Microsoft Bing


Google


yahoo!


Яндекс


Microsoft Bing


Google


yahoo!
Яндекс
Microsoft Bing
Google


Search Google or type a ...
schema.org

Schema.org

https://schema.org › docs › how to look at and use schema.org

How to look at and use schema.org

Schema.org is a work in progress that will keep evolving over the next many years. This guide will help you come to grips with how to look at and make use of the vocabulary

Schema.org

https://schema.org › docs › how to look at and use schema.org

How to look at and use schema.org

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1. Schema.org is not a checklist that needs to be filled out.

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https://schema.org › docs › how to look at and use schema.org

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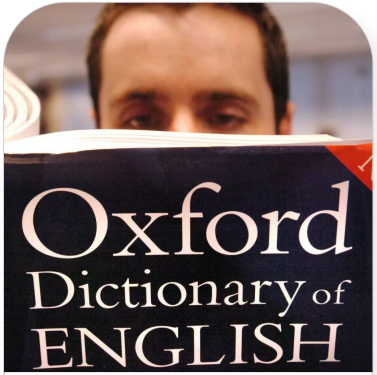

2. Treat schema.org as a dictionary. These don't tell us what to write.

Schema.org

https://schema.org › docs › how to look at and use schema.org

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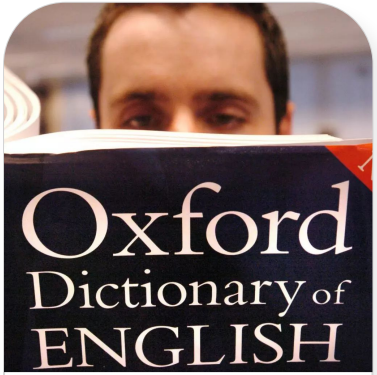

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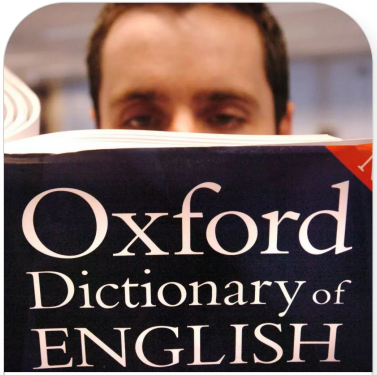


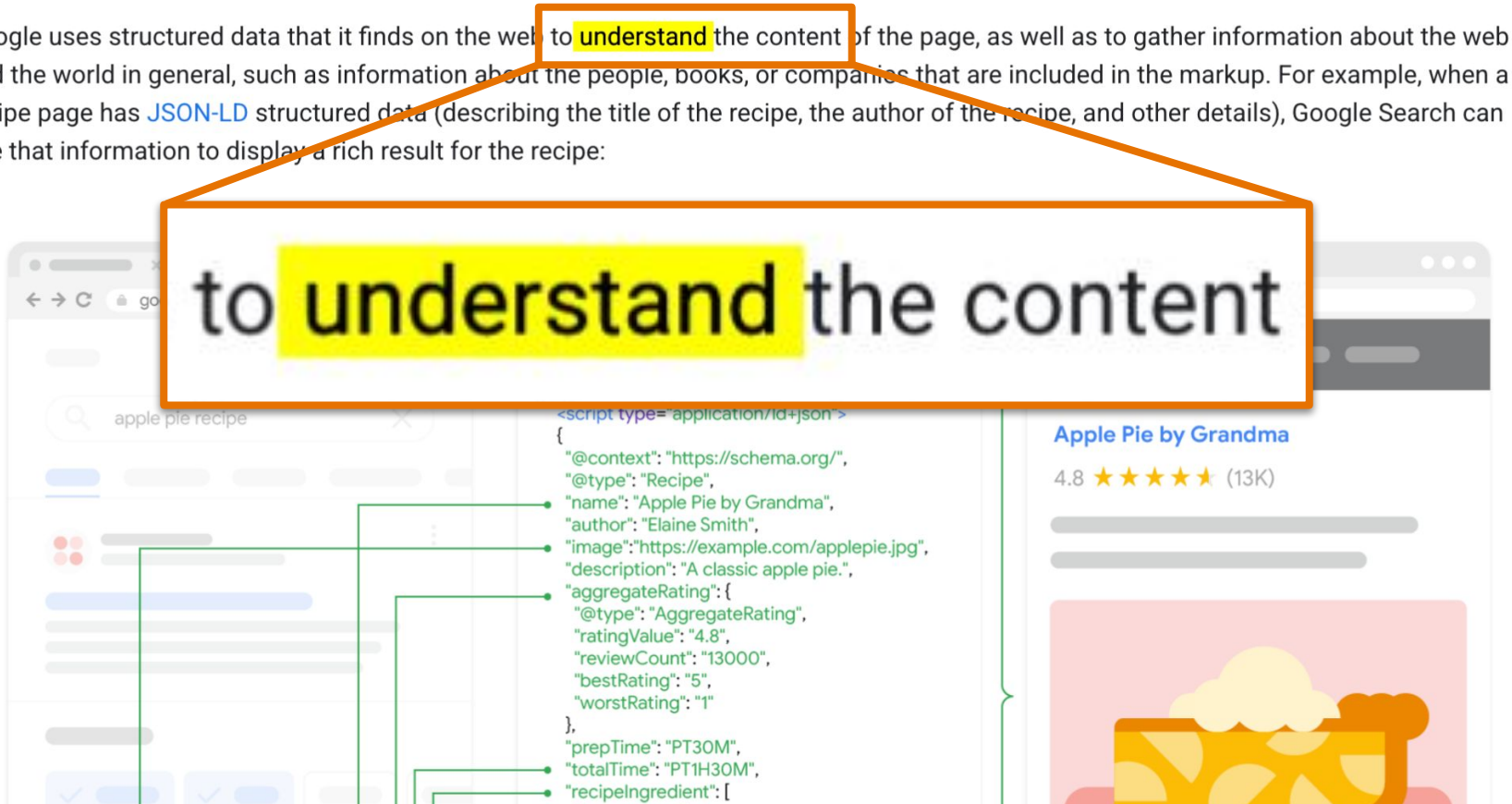
2. Treat schema.org as a dictionary. These don't tell us what to write.

3. Languages aren't static, they evolve. The usage of terms changes ∞.

4. Read Google's SD Feature Guide to learn which terms to use.

How structured data works in Google Search

Google uses structured data that it finds on the web to understand the content of the page, as well as to gather information about the web and the world in general, such as information about the people, books, or companies that are included in the markup. For example, when a recipe page has JSON-LD structured data (describing the title of the recipe, the author of the recipe, and other details), Google Search can use that information to display a rich result for the recipe:



What if Schema.org is just… Labels?

We've all been sold the idea that adding Schema.org markup to your website will help Google to "understand" your content. Structured data has become SEO gospel, and I've been one of its loudest advocates. I've encouraged brands to invest in schema markup, to label their content, and to define their entities in order to unlock Google's rich results and to improve their visibility. But here's a thought: what if Schema.org is

I'm speaking at...

SMX Munich, 2025

2025-03-18 / 2025-03-19
Munich, Germany
smxmuenchen.de

SEO for News Meetup

2025-03-20
Munich, Germany
eventbrite.com/e/seo-for-...

Marketing Festival, Brno

2025-04-28 / 2025-04-30
Brno, Czech Republic
marketingfestival.cz

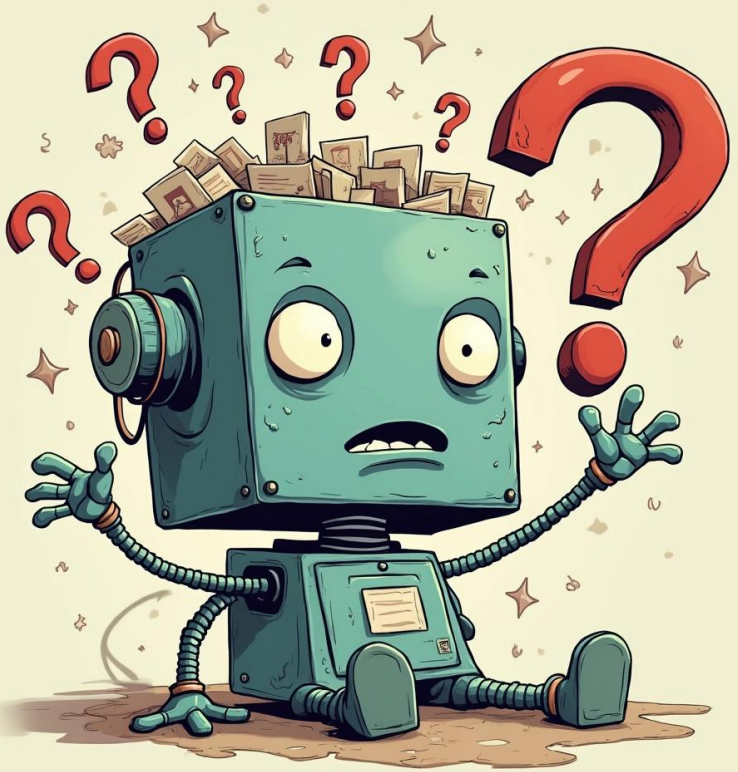


image source: Dall-E 3

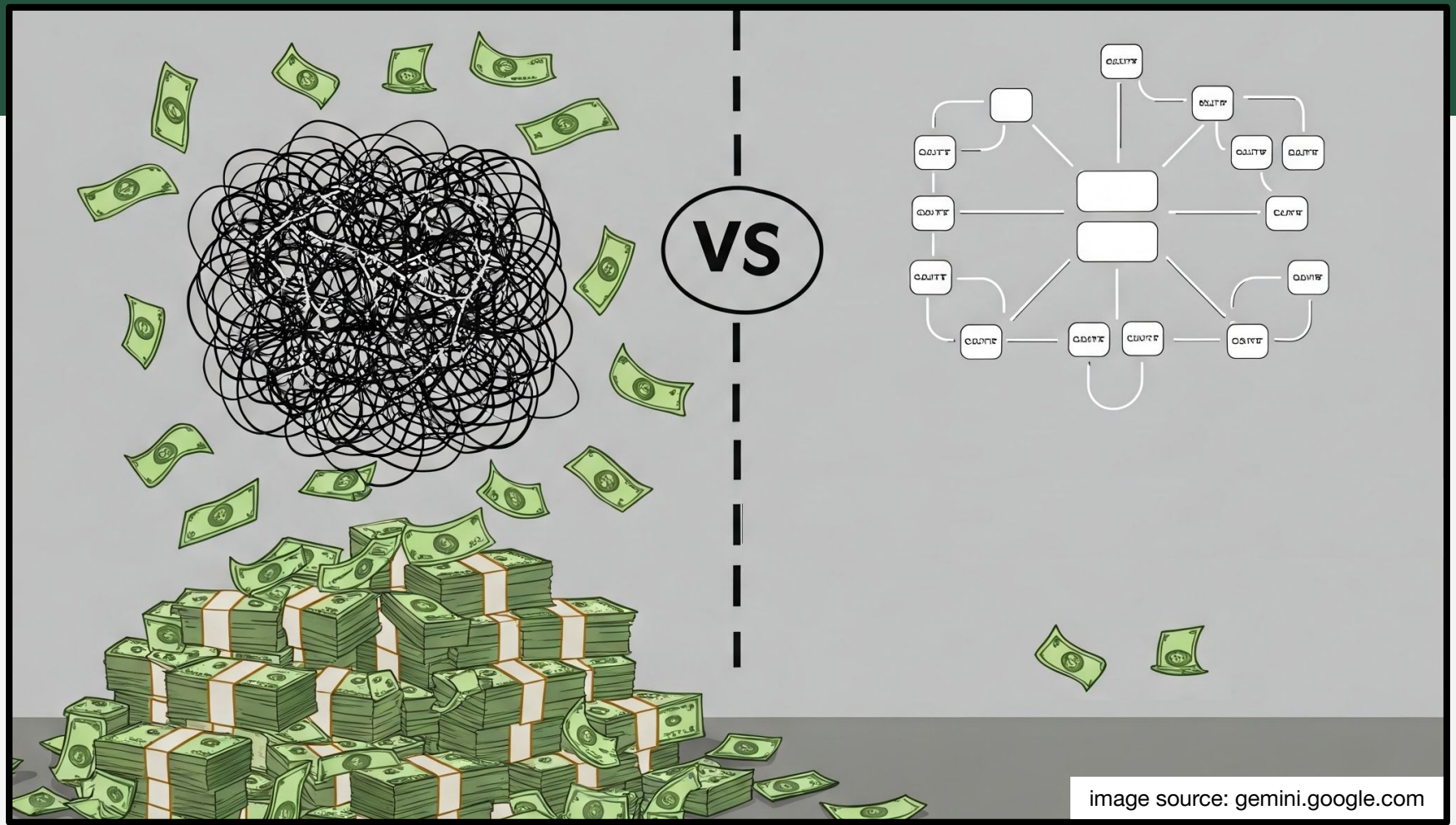
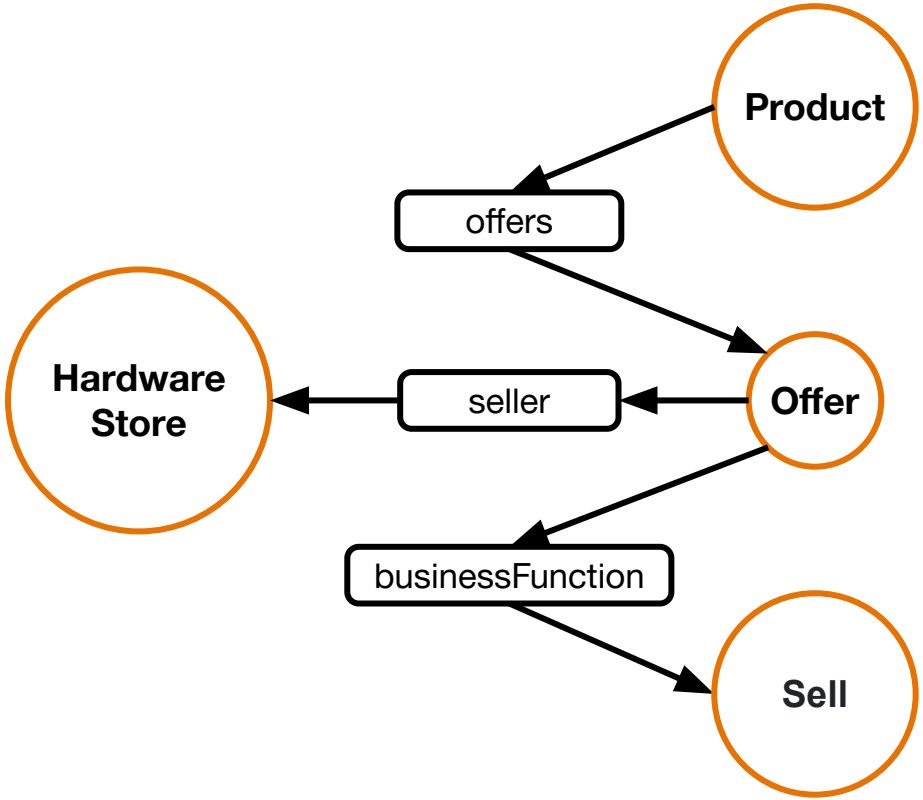
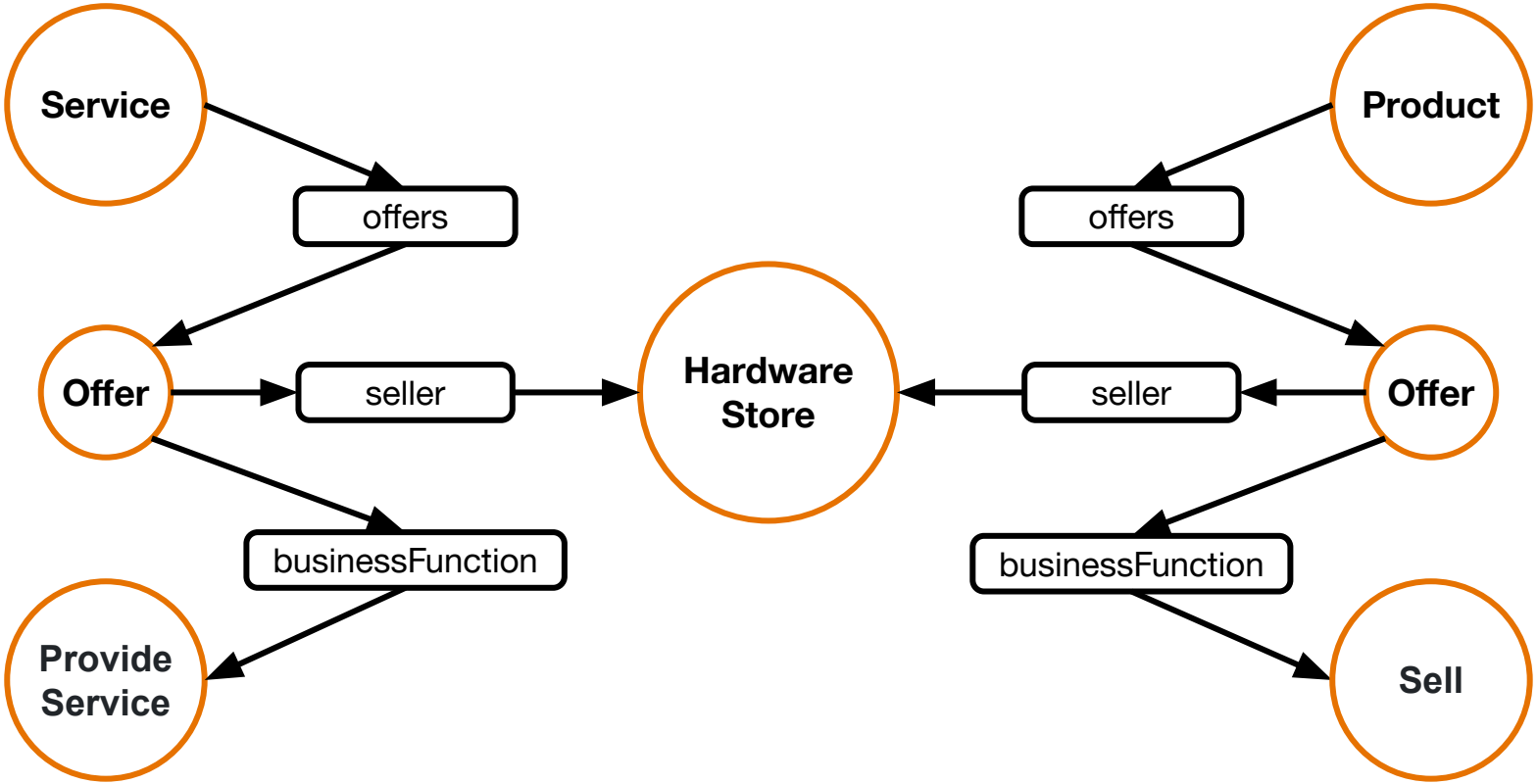


image source: gemini.google.com

image source: reddit.com


Hardware
Store


Product
offers
Hardware Store
seller
Offer
businessFunction
Sell


Service
offers
Offer
seller
businessFunction
Provide Service
Hardware Store
Product
offers
Offer
seller
businessFunction
Sell

HardwareStore ≠ Renovation ≠ Construction ≠ Building material ≠ Home appliance ≠ Door ≠ Garage door ≠ Roof ≠ Window ≠ Cabinetry ≠ Flooring ≠ HVAC ≠ Window covering

```
{
  "@context": "https://schema.org",
  "@type": "HardwareStore",
  "additionalType": [
  "http://en.wikipedia.org/wiki/Renovation",
  "http://en.wikipedia.org/wiki/Construction",
  "http://en.wikipedia.org/wiki/Building_material",
  "http://en.wikipedia.org/wiki/Home_appliance",
  "http://en.wikipedia.org/wiki/Door",
  "http://en.wikipedia.org/wiki/Garage_door",
  "http://en.wikipedia.org/wiki/Roof",
  "http://en.wikipedia.org/wiki/Window",
  "http://en.wikipedia.org/wiki/Cabinetry",
  "http://en.wikipedia.org/wiki/Flooring",
  "http://en.wikipedia.org/wiki/HVAC",
  "http://en.wikipedia.org/wiki/Window_covering"
]
```

image source: commons.wikimedia.org

```
{
  "@context": "https://schema.org",
  "@type": "Brand",
  "@id": "http://www.wikidata.org/entity/Q288523",
  "name": "Acme Inc.",
  "alternateName": "Acme Corporation",
  "sameAs": [
    "https://en.wikipedia.org/wiki/Acme_Corporation",
    "https://warnerbros.fandom.com/wiki/ACME_Corporation",
    "https://looneytuneswiki.com/wiki/Acme"
  ]
}
```

```
<a href="https://en.wikipedia.org/wiki/Acme_Corporation"
   title="Read more about Acme Corporation on Wikipedia">
   Acme Inc.
</a>
```

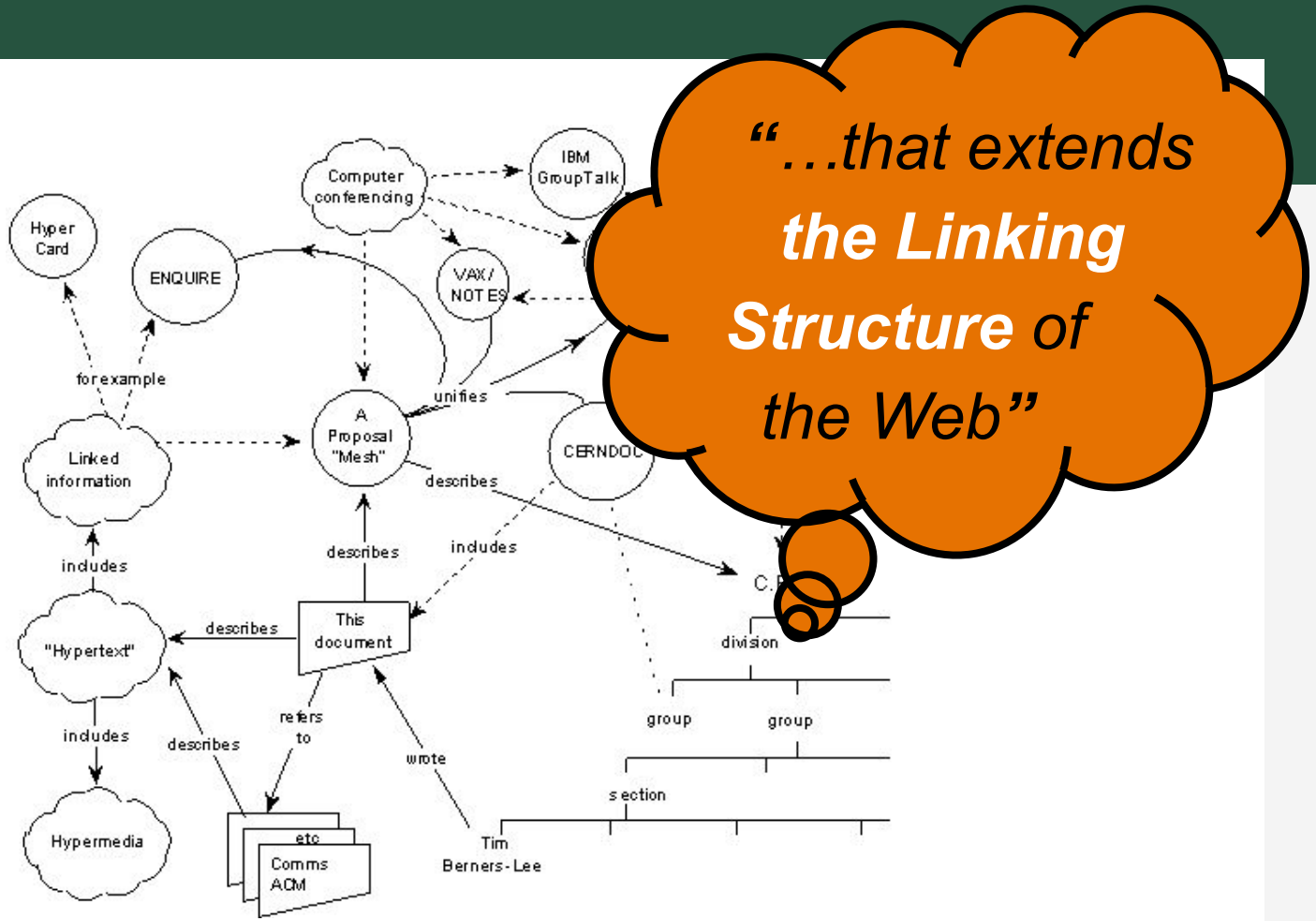

Computer conferencing
IBM GroupTalk
Hyper Card
ENQUIRE
VAX/ NOTES
for example
unifies
A Proposal "Mesh"
CERNDOC
Linked information
describes
includes
describes
includes
"Hypertext"
describes
This document
division
group
group
includes
describes
refers to
wrote
section
Hypermedia
etc
Comms ACM
Tim Berners-Lee
"…that extends the Linking Structure of the Web"

image source: highlander.fandom.com

image source: vlipsy.com

```
"about": [{
    "@type": "DefinedTerm",
    "name": "Academic publishing",
    "alternateName": ["scholarly publishing","research publishing"],
    "sameAs": "https://en.wikipedia.org/wiki/Academic_publishing"
  }, {
    "@type": "DefinedTerm",
    "name": "Essay",
    "alternateName": "composition",
    "sameAs": "https://en.wikipedia.org/wiki/Essay"
  }, {
    "@type": "DefinedTerm",
    "name": "Analysis",
    "alternateName": ["Analyzing","Close analysis"],
    "sameAs": "https://en.wikipedia.org/wiki/Analysis"
  }, {
    "@type": "DefinedTerm",
    "name": "Elizabeth II",
    "alternateName": ["Queen Elizabeth II","Queen of England"],
    "sameAs": "https://en.wikipedia.org/wiki/Elizabeth_II"
```

DefinedTerm

All (36)

DefinedTerm RORS 0 WARNINGS

DefinedTerm RORS 0 WARNINGS

DefinedTerm RORS 0 WARNINGS

DefinedTerm RORS 0 WARNINGS

DefinedTerm RORS 0 WARNINGS

DefinedTerm 0 ERRORS 0 WARNINGS

```
{
  "@context": "https://schema.org",
  "@type": "Thing",
  "@id": "http://www.wikidata.org/entity/Q35255",
  "name": "Puma",
  "alternateName": ["cougar","panther","mountain lion"],
  "sameAs": "https://en.wikipedia.org/wiki/Cougar"
}
```

VS

PUMA®

WE NEED A WRITER

You're passionate about copy and advertising. You could be a girl - hello girls. You could be a boy - hello boys. No juniors though, sure you can be small but tough, snowplough, drives to the snowplough?

We'll want you to think big, we'll want you to think small and sometimes we'll want you to just do it. You'll write cop

image source: adsoftheworld.com

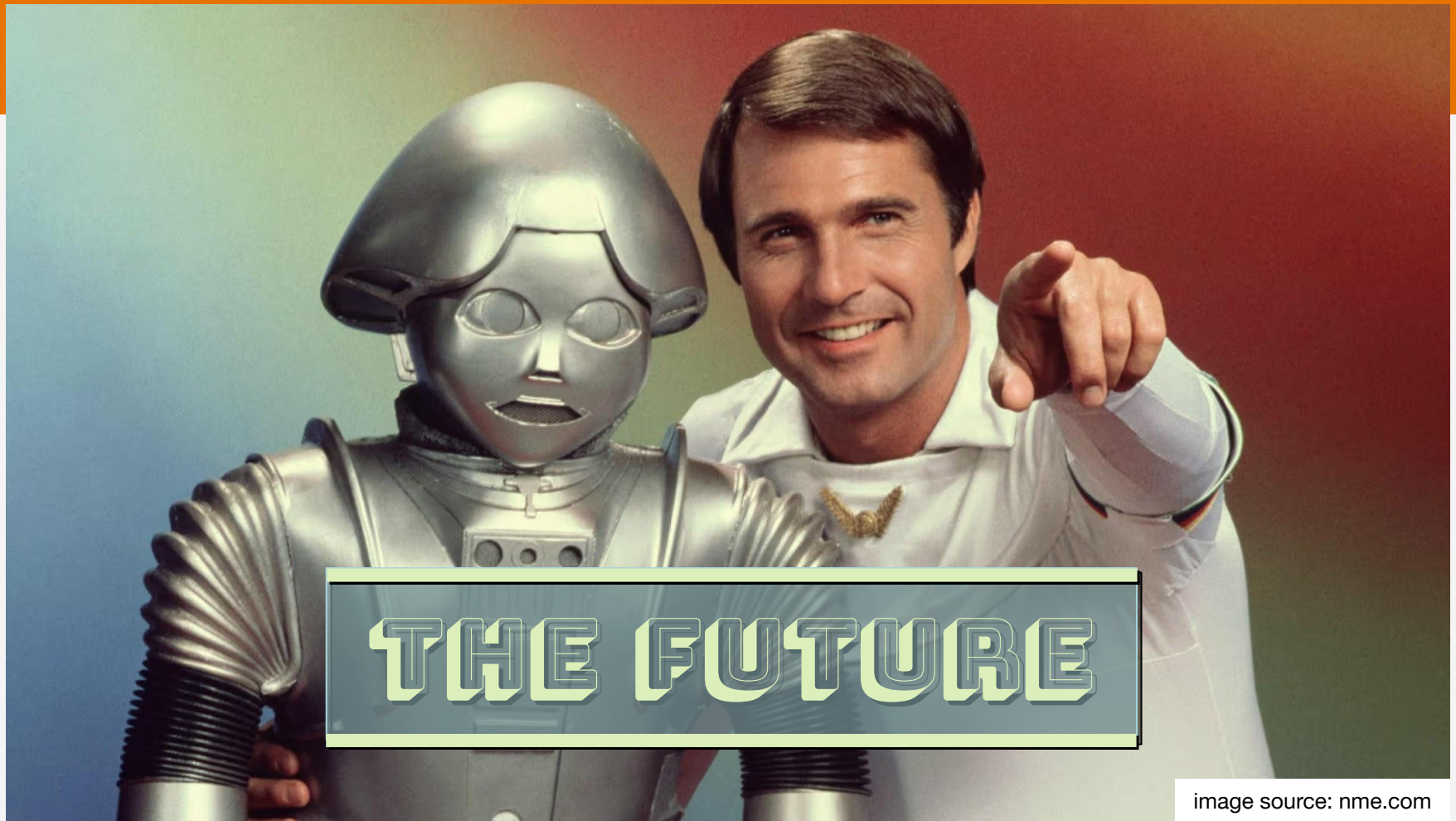


image source: nme.com

Croissant Format Specification

1. It proposes a machine-readable way to capture and publish metadata about ML datasets – this makes existing documentation solutions like Data Cards easier to publish, share, discover, and reuse;

2. It records at a granular level how a dataset was created, processed and enriched throughout its lifecycle – this process is meant to be automated as much as possible by integrating Croissant with popular ML frameworks. By allowing the metadata to be loaded automatically, Croissant also enables developers to compute RAI metrics automatically and systematically, identifying potential data quality issues to be fixed.

Format Example

To understand the various pieces of a Croissant dataset description, let's look at an example, based on the PASS dataset.

Croissant metadata is encoded in JSON-LD.


```
{
  "@context": {
    "@language": "en",
    "@vocab": "https://schema.org/"
  },
  "@type": "sc:Dataset",
  "name": "simple-pass",
  "conformsTo": "http://mlcommons.org/croissant/1.0",
  "description": "PASS is a large-scale image dataset that does not include any humans ...",
  "citeAs": "@Article{asano21pass, author = \"Yuki M. Asano and Christian Rupprecht and ...",
  "license": "https://creativecommons.org/licenses/by/4.0/",
  "url": "https://www.robots.ox.ac.uk/~vgg/data/pass/",
```


The beginning of the Croissant description contains general information about the dataset such as name, short description, license and URL. Most of these attributes are from schema.org, with a few additions described in the Dataset-level information section.

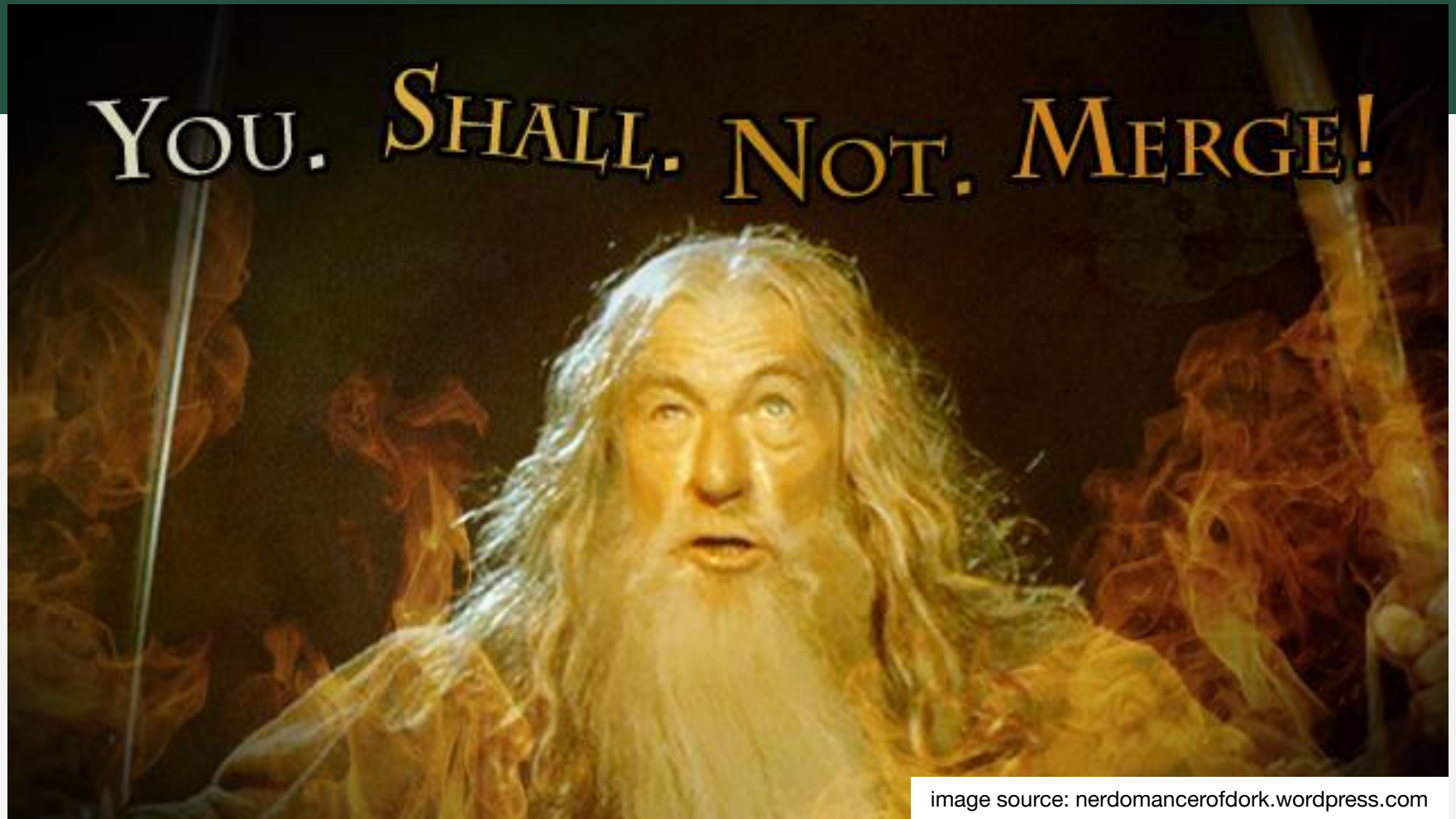
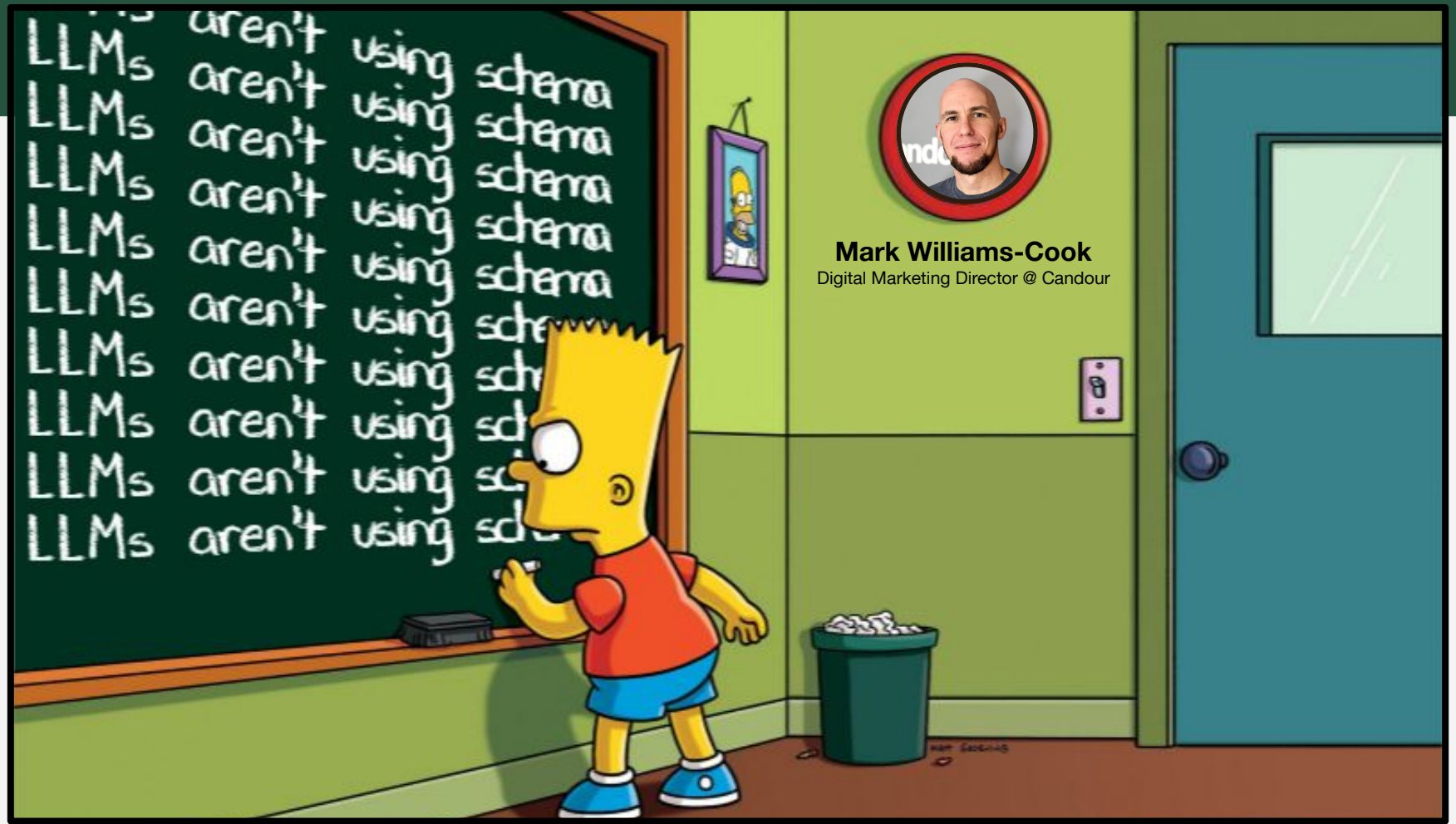


image source: nerdomancerofdork.wordpress.com


LLMs aren't using schema
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Mark Williams-Cook
Digital Marketing Director @ Candour

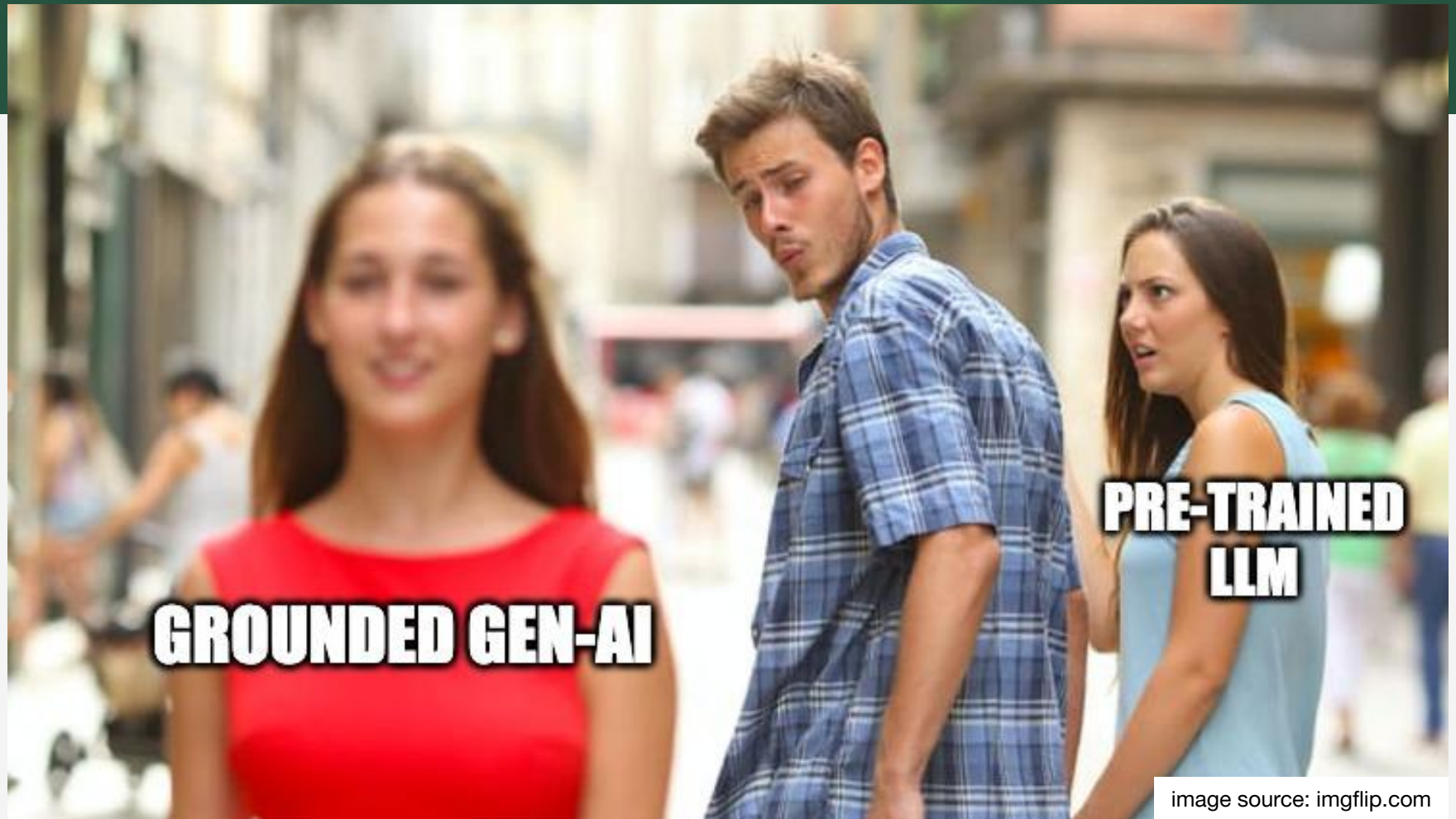
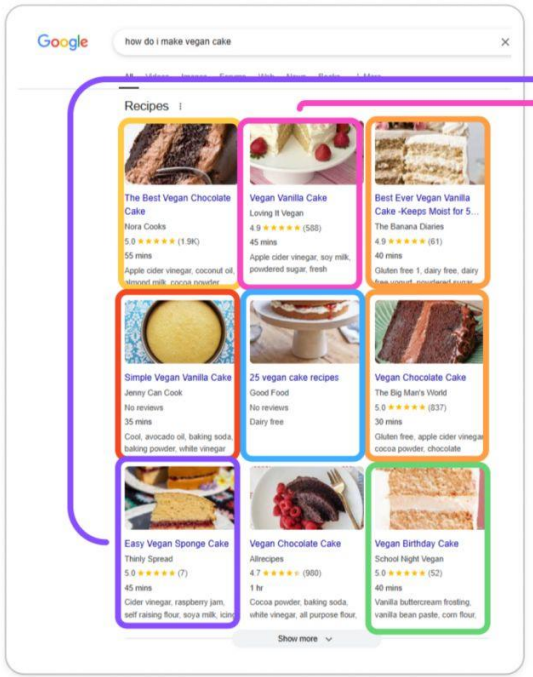


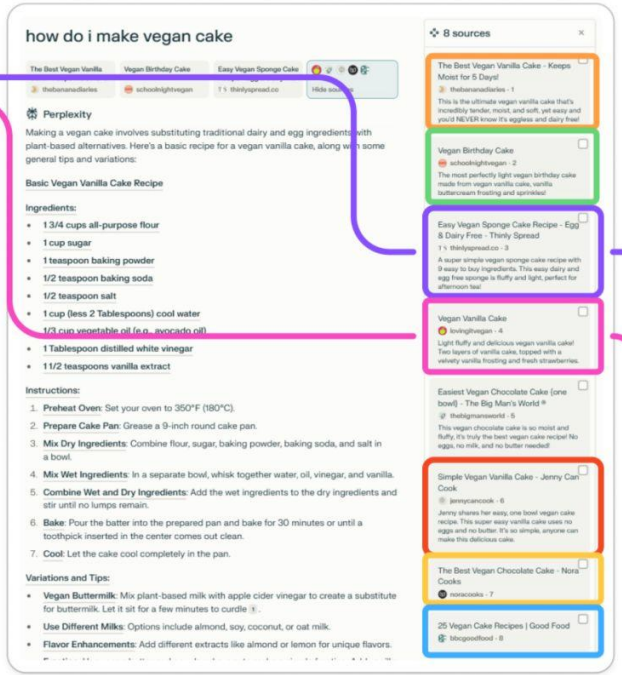
image source: imgflip.com

Crystal Cartel
Head of SEO Communications @ Wix

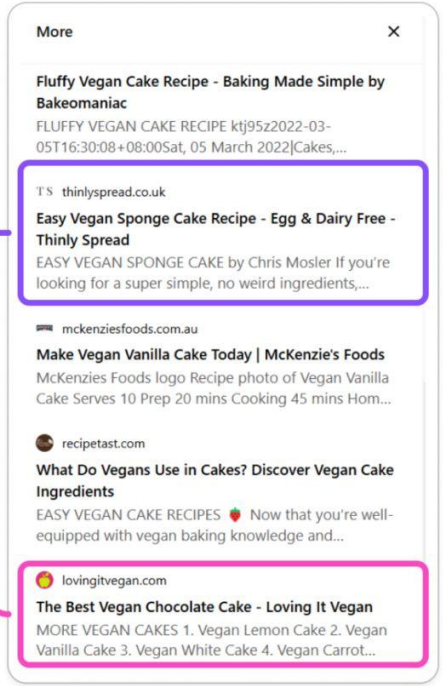
Google Rich Results



Perplexity Sources



Search GPT Sources



Custom label 0-4 `[custom_label_0-4]`
 	
Label that you assign to a product to help organize bidding and reporting in Shopping campaigns
 	
Optional
 	
Example
Seasonal
Clearance
Holiday
Sale
Price range
 	
Syntax
Max 100 characters
 	
Schema.org property: No
	• Use a value that you'll recognize in your Shopping campaign. The value won't be shown to customers who see your ads and free listings.
	• Submit up to 5 custom labels per product by including this attribute multiple times:
	  • `custom_label_0`
	  • `custom_label_1`
	  • `custom_label_2`
	  • `custom_label_3`
	  • `custom_label_4`
	• Use only 1,000 unique values for each custom label across your Merchant Center account.

Promotion ID `[promotion_id]` An identifier that allows you to match products to promotions **Optional** (Required for promotions in Australia, France, Germany, India, the UK and the US) **Example** ABC123 **Syntax**	• Use a unique and case sensitive ID without spaces or symbols (for example, %, !). • To map specific promotions to specific products, submit the same promotion ID in your product data and promotion data. • Submit up to 10 promotion IDs for one product by including this attribute multiple times.

Product data specifications

Product data specification

RSS 1.0 specification

RSS 2.0 specification

Atom 1.0 specification

Atom 0.3 specification

About attributes with repeated fields

About display ads attribute specification

image source: chatgpt.com

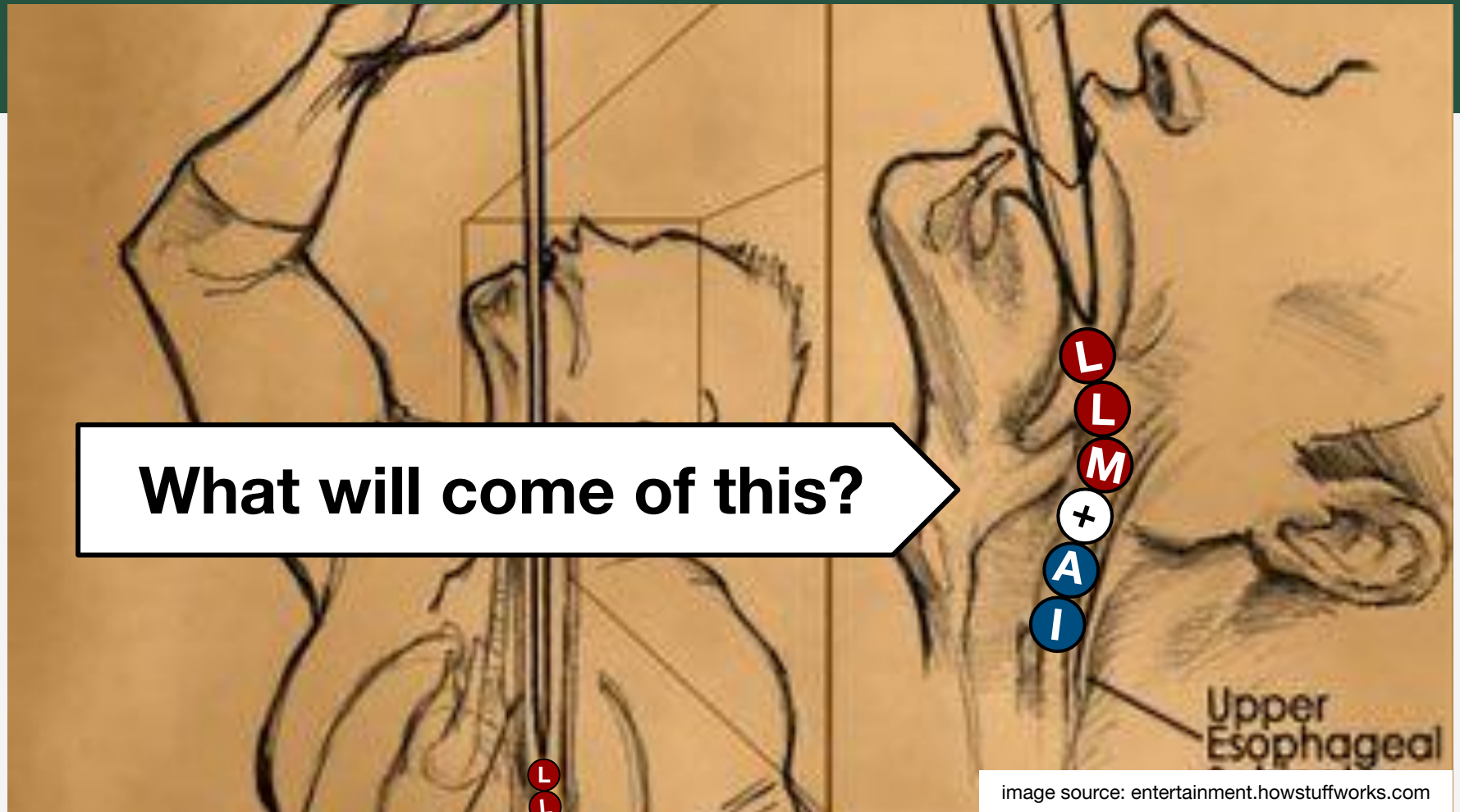


image source: entertainment.howstuffworks.com

image source: ad.nl

A big THANK YOU goes to

Dan Brickley - Schema.org chair / Data Standards Engineering

John Muller - Senior Search Analyst / Search Relations team lead at Google

Ryan Levering - Software Engineer at Google

Alex Jansen - Senior Staff Software Engineer at Google

Dave Ojeda - Structured Data & Semantic SEO consultant

Andrea Volpini - CEO & co-founder of WordLift

Mark van Berkel - Semantic Technologist & co-founder of Schema App

role

Structured Data &
Semantic SEO Consultant

role

Guest teacher at SEOPRO ACADEMY

sameAs

jarnovandriel.bsky.social

sameAs

linkedin.com/in/jarno-van-driel