















STRUCTURED DATA RESEARCH

Rock Art Database

SAE WEB

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Research Credits

Adobe Creative Suite: Photoshop, Illustrator, Indesign

Microsoft Office: Word, Excel, Powerpoint

Windows 10: Photos, Explorer

Google Chrome

Introduction

What is structured data?

- > A repository of data organised into a database for online access
- ➤ An example of a structured data management system is SQL (Structured Query Language) (Beal, 2018)

Findings

Structured and Unstructured Data

- > **Structured** data is the raw information created through spreadsheets and machine sensors in a language that machines can understand through algorithms
- Unstructured data is a more personal language understandable by humans text, emails, images, videos etc
- > (Wolfe, 2017)

Amp

- Accelerated Mobile Pages (About, n.d.)
- Create web pages for mobile with smooth loading, frameworks, browser compatible
- Google indexes AMP and if is available can be featured on mobile search as part of rich results and carousels
- There are categories for AMP to create better results: blogs, articles, restaurants, recipes, videos etc
- Results are seen as Rich Cards (Introducing Rich Cards, 2017) created by Google

Metadata Tags

- Used to tag data it is a vocabulary format designed for computers to locate relatable content
- Commonly used is Dublin Core (Dublin Core Metadata Initiative, 1995-2018)
- Metadata is used heavily in social media interaction by websites such as YouTube, Twitter, Facebook and blogging websites to name a few
- A versatile tool it "tags" articles/images/texts and links them together so users can find similar data
- "Tagging" is a user friendly version of metatagging where metatagging is simply more technical and only seen in development
- The infamous "hashtag" (Campbell, 2018) is actually derived from scripting markups i.e. \$varFunction etc. In scripting there are functions for all symbols hence

Google Structured Data

- Uses a scripting markup to understand and sort the content of the page (Structured Data General Guidelines, 2018)
- The script scans for tags matching certain parameters and displays it in the search result (figure 1)

```
Search result feature
                          Equivalent structured data (trimmed for brevity)
                          <script type="application/ld+json">
                            "@context": "http://schema.org/",
                            "@type": "Recipe",
                            "name": "Grandma's Holiday Apple Pie",
                            "author": "Elaine Smith",
                            "image": "http://images.edge-generalmills.com/56459281-6fe6-4d9d-984f-385
                            "description": "A classic apple pie.",
                            "aggregateRating": {
                              "@type": "AggregateRating",
                              "ratingValue": "4",
                              "reviewCount": "276",
                              "bestRating": "5",
                              "worstRating": "1"
                            "prepTime": "PT30M",
                            "totalTime": "PT1H",
                            "recipeYield": "8",
                             'nutrition": {
                              "@type": "NutritionInformation",
                              "servingSize": "1 medium slice",
                              "calories": "230 calories",
                              "fatContent": "1 g",
                              "carbohydrateContent": "43 g",
                            "recipeIngredient": [
                              "1 box refrigerated pie crusts, softened as directed on box",
                              "6 cups thinly sliced, peeled apples (6 medium)",
                            "recipeInstructions": [
                             1...",
                             1
                          </script>
```

Figure 1

- Commonly used is Schema.org (Welcome To Schema, n.d.), founded by Google, Yahoo and Yandex
- Linking to Schema will give users a repository of variables for Google to scan
- Google has a set of guidelines for their use including using original content, no fake news or content, violent content, tricks and deceptions to entice users, false links, illegal activities etc (Webmaster Guidelines, 2018)
- > They also have a set of technical guidelines (Structured Data General Guidelines, 2018) to ensure optimal usage using particular markup formats such as JSON-LD (JavaScript), Microdata (html) and RDFa (html5 markup that supports html tags)
- > Content must be relevant to the structured data and organised according to their guidelines
- Google also has a testing application where users can test their structured data results (Build, Test and Release Your Structured Data, 2018)

- ➤ There are many sections on the Google Search website (Home, 2018) pertaining to conditions, usability, file structure and data information for users
- Most importantly it discusses the use of "crawlers" which is a service that browses the web for indexed information such as structured data
- A crawler is simply a bot that exists within the search engine
- ➤ Indexing correctly is important without it the crawl is less effective

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