# Linked Data Benchmark Council 2.5-year status report

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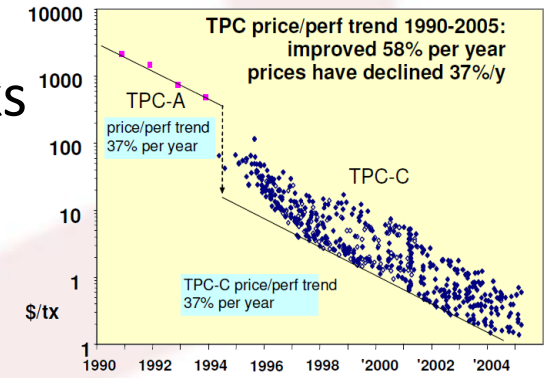
# Why Benchmarking?

- make competing products comparable (quantify)
  - E.g. make the case for graphDB vs RDBMS
  - measure progress in versions/products
- accelerate progress, make technology viable
  - Maturing RDF systems
  - Maturing property graph systems
  - Maturing graph programming frameworks

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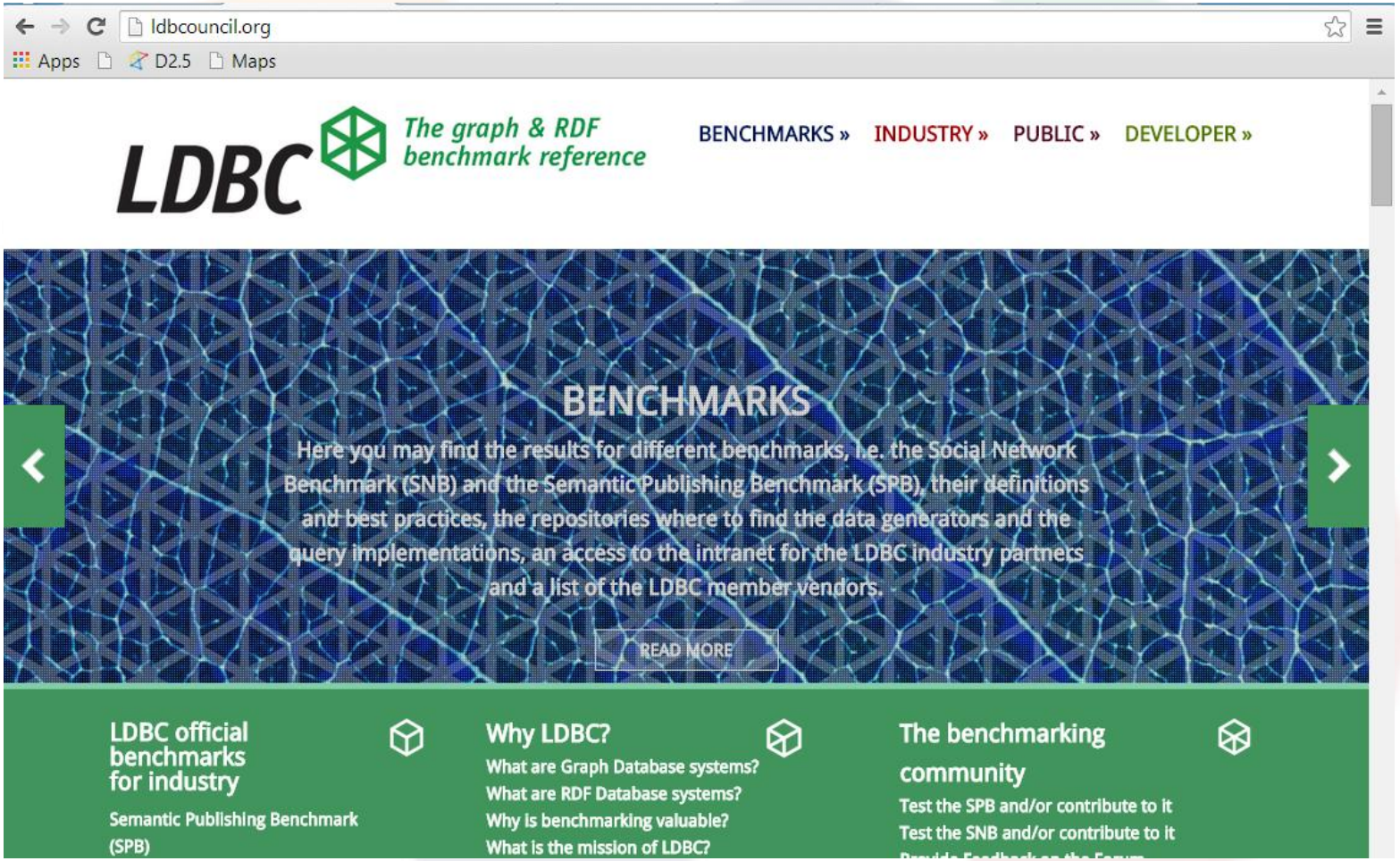
Linked Data Benchmark Council

# ldbcouncil.org



# LDBC: what systems?

Benchmarks for:

- Graph Database systems
  - Neo4j, SparkSee, InfiniteGraph, …
- RDF stores (SPARQL speaking)
  - Virtuoso, GraphDB, BlazeGraph, Allegrograph,…
- Graph Programming Frameworks
  - Giraph, Green Marl, Grappa, GraphLab,…
- Relational Database systems

# Industry Membership

# What is LDBC doing now?

Two main “task forces”:

- Semantic Publishing Benchmark (SPB)
  - BBC use case – RDF oriented
  - **New version 2.0 with extended ontologies**
- Social Network Benchmark (SNB)
  - Interactive workload (ready)
  - BI workload **(almost draft)**
  - Graph algorithms workload

See: **github.com/LDBC**

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  - Interactive workload (ready)
  - BI workload (**almost draft**)
- **SNB Analytics Benchmark**
  - Graph algorithms workload (graphalytics)
  - Partnering with TU Delft / Oracle Labs

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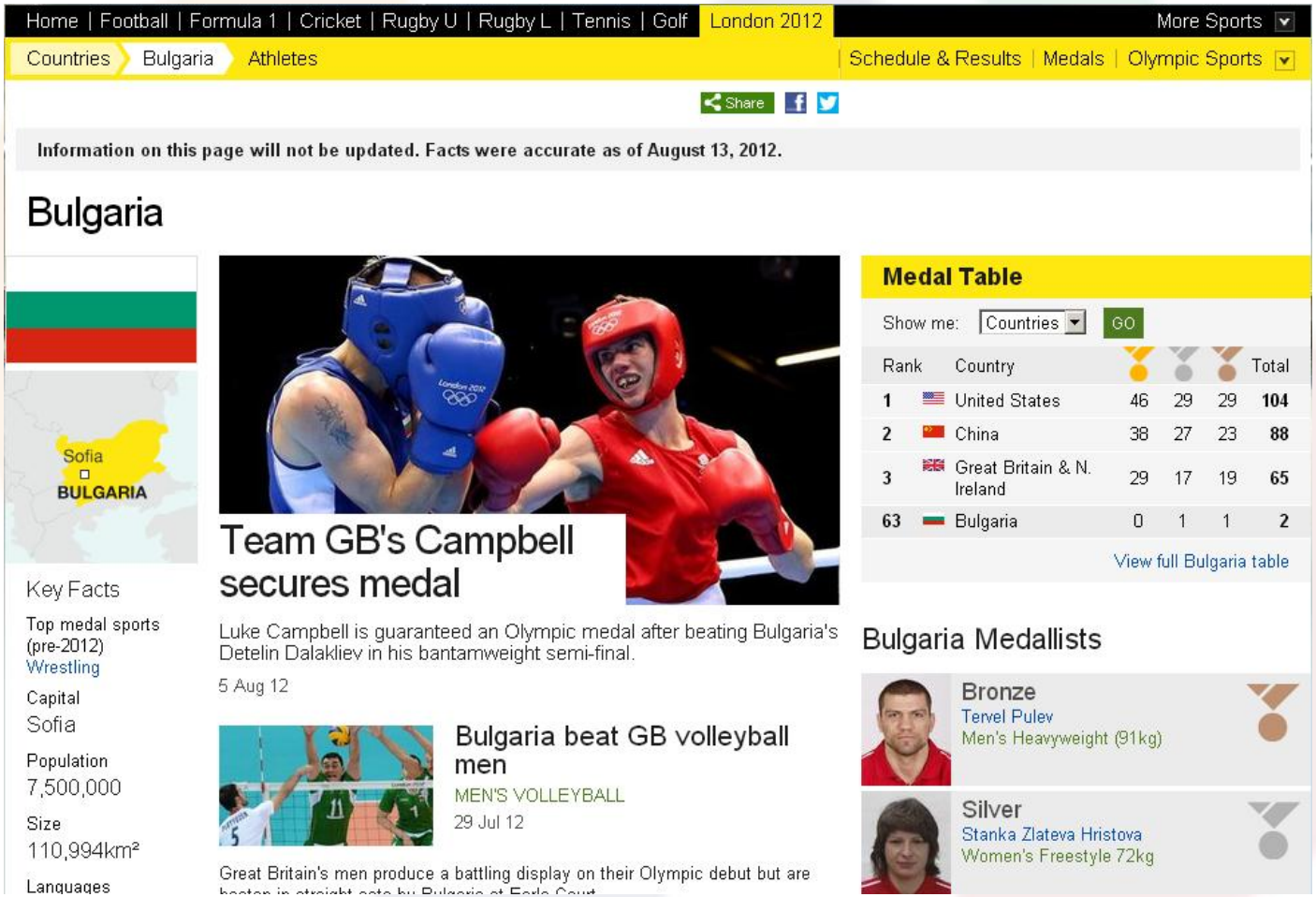
# SNB: Workloads

- **Interactive**: tests a system's throughput with relatively simple queries with concurrent updates
  - *Show all photos posted by my friends that I was tagged in*
- **Business Intelligence**: consists of complex structured queries for analyzing online behavior
  - *Influential people the topic of open source development?*
- **Graph Analytics**: tests the functionality and scalability on most of the data as a single operation
  - *PageRank, Shortest Path(s), Community Detection*

  ➔ *GRAPHALYTICS cooperation (TU Delft, Oracle Labs)*

# Semantic Publishing Benchmark (SPB)

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# Getting the word Out

- LDBC is getting a second life!
  - new & independent logo, infrastructure

- Benchmark Results Campaign
  - Social Media, Blogs, White Papers, Press Releases, Markerting,…
  - SPB 2.0 Audited results:
    - ONTO/OWLIM
    - Openlink/Virtuoso
  - SNB 1.0 Audited Results:
    - Sparsity/Sparksee
    - Openlink/Virtuoso
    - HP Labs/Titan

# LDBC Roadmap

- EU project almost done
  - Final review April 28, Luxemburg
  - LDBC non-profit company takes over
  - Writing an Elsevier book
- 7th Technical User Community Meeting
  - November 2015, at TJ Watson IBM
- GRADES 2015 workshop
  - May 31, SIGMOD/PODS 2015 @ Melbourne, Australia (!)
- Focus on Benchmark Results
  - Officially adopt SNB + SPB
  - Produce Audited Results