

EXI 4 Thing Description

W3C Efficient XML Interchange (EXI)

EXI in a few points

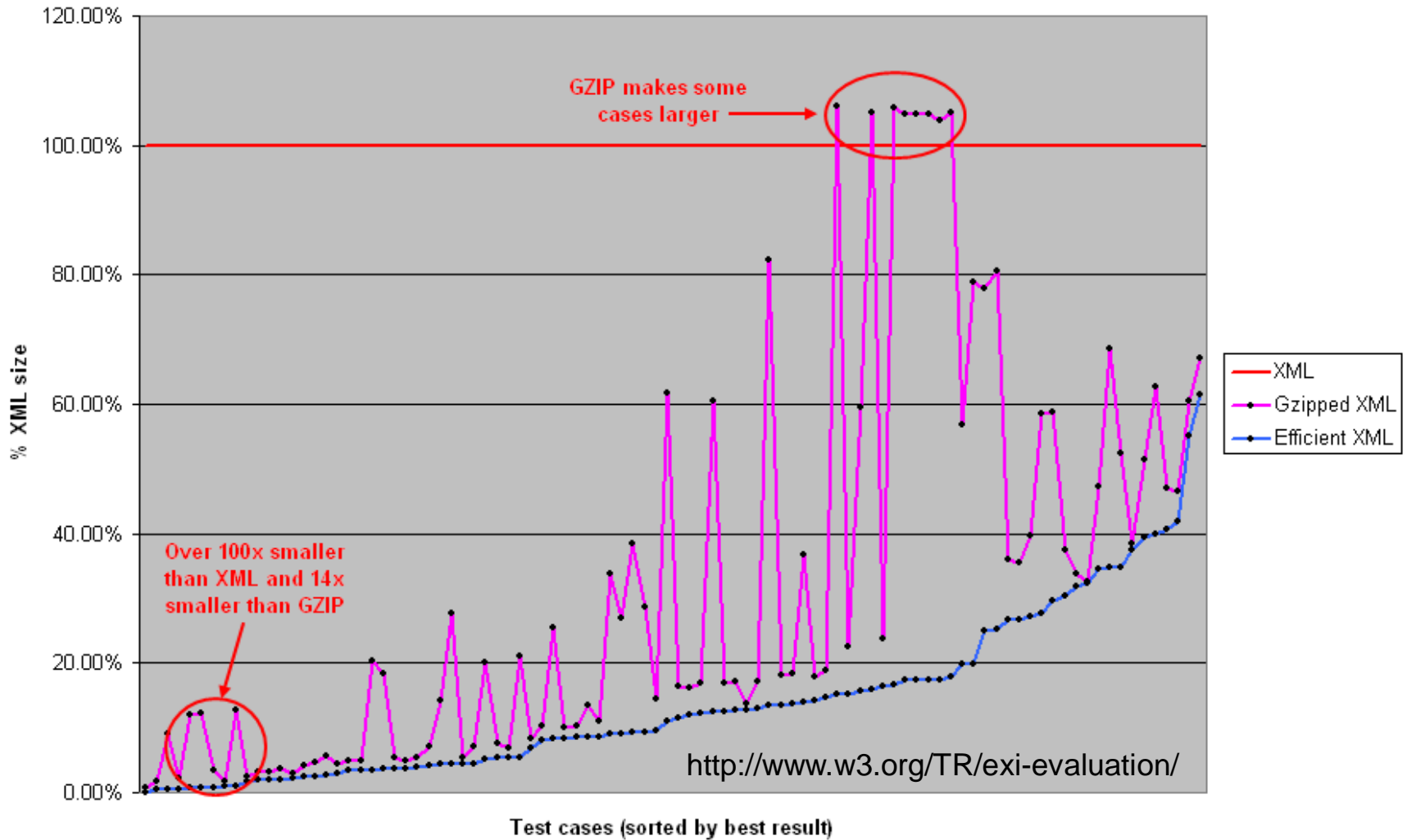
- Alternative XML serialization to ASCII or UTF8
- Use of XML on embedded devices and microcontrollers
- Similar or more efficient than hand optimized binary formats
- Maintains advantages of XML
- Fast read and write processing based on typed information
- Process data as you receive (streamability)
- Royalty free policy of W3C (same as XML)

EXI is gaining acceptance in various communities

- ISO 15118 / DIN 70121
- ZigBee's Smart Energy Profile 2.0
- IETF (CoAP)
- XMPP (XEP-0322)
- ONVIF Media Service Specification

EXI Evaluation

EXI Compactness Compared to Gzipped XML



Recent EXI Activities

EXI 1.0 is a W3C Recommendation since March 2011.

EXI profile

- Sub-set of EXI 1.0 avoiding runtime memory allocation
- Full conformance with EXI 1.0

Canonical EXI

- Support for EXI Signature
- Currently EXI supports already XML Signature

JSON Support

W3C Working Draft



Efficient XML Interchange (EXI) Profile

W3C Working Draft 31 July 2012

This version:

<http://www.w3.org/TR/2012/WD-exi-profile-20120731/>

Latest version:

<http://www.w3.org/TR/exi-profile/>

Previous version:

<http://www.w3.org/TR/2012/WD-exi-profile-20120410/>

Editors:

Youenn Fablet, Canon Research Centre France
Daniel Peintner, Siemens AG

W3C Working Draft



Canonical EXI

W3C Working Draft 19 September 2012

This version:

<http://www.w3.org/TR/2012/WD-canonical-exi-XXXXXXXXXX/>

Latest version:

<http://www.w3.org/TR/canonical-exi/>

Editors:

Sebastian Kabisch, Siemens AG
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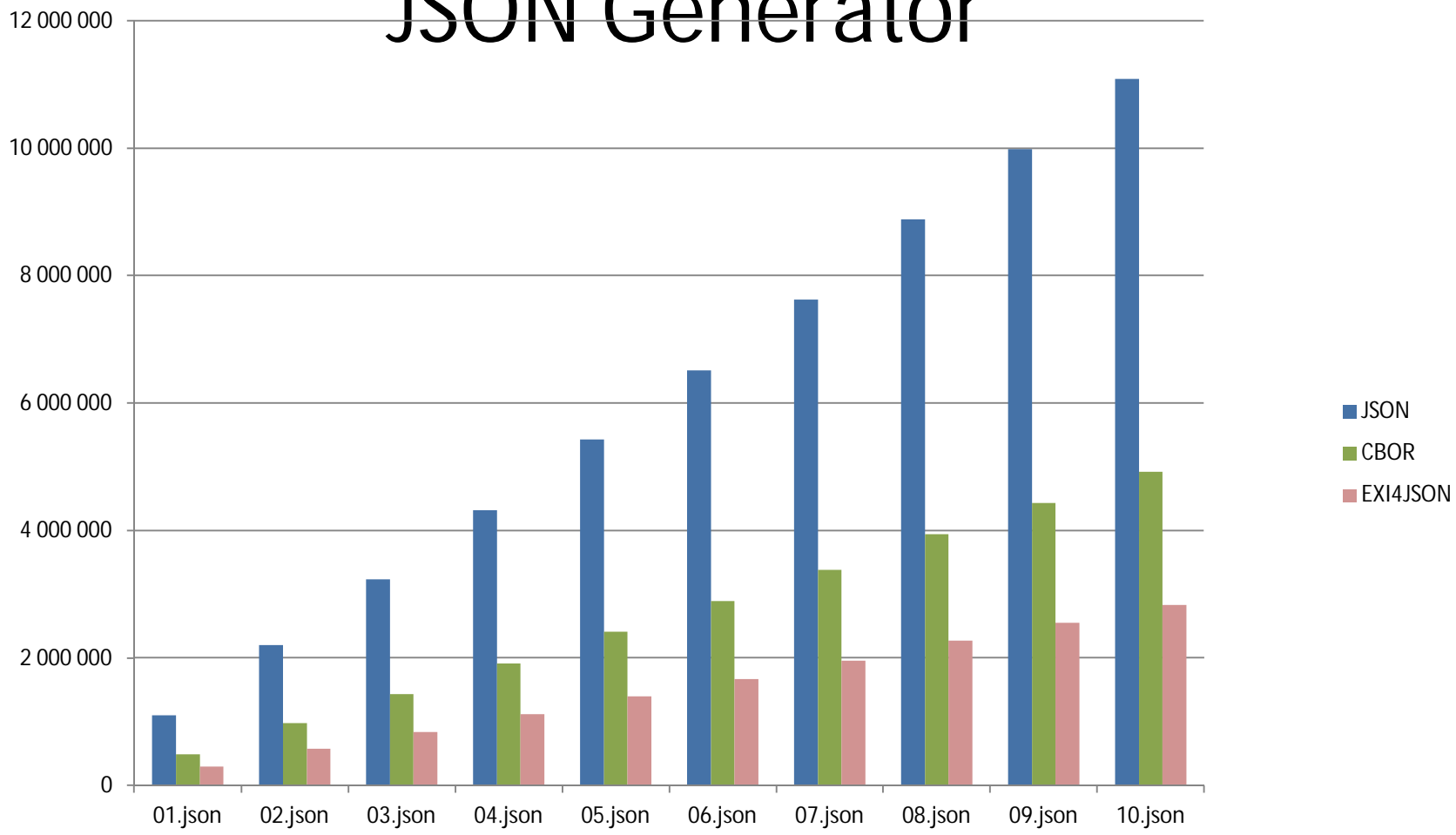
JSON Support Reasoning

What is the best way to efficiently support JSON data in EXI in a fast and easy way?

- Use what is there already
(e.g., existing EXI processors, XML schema support, ...)
- Use XML schema to map JSON data

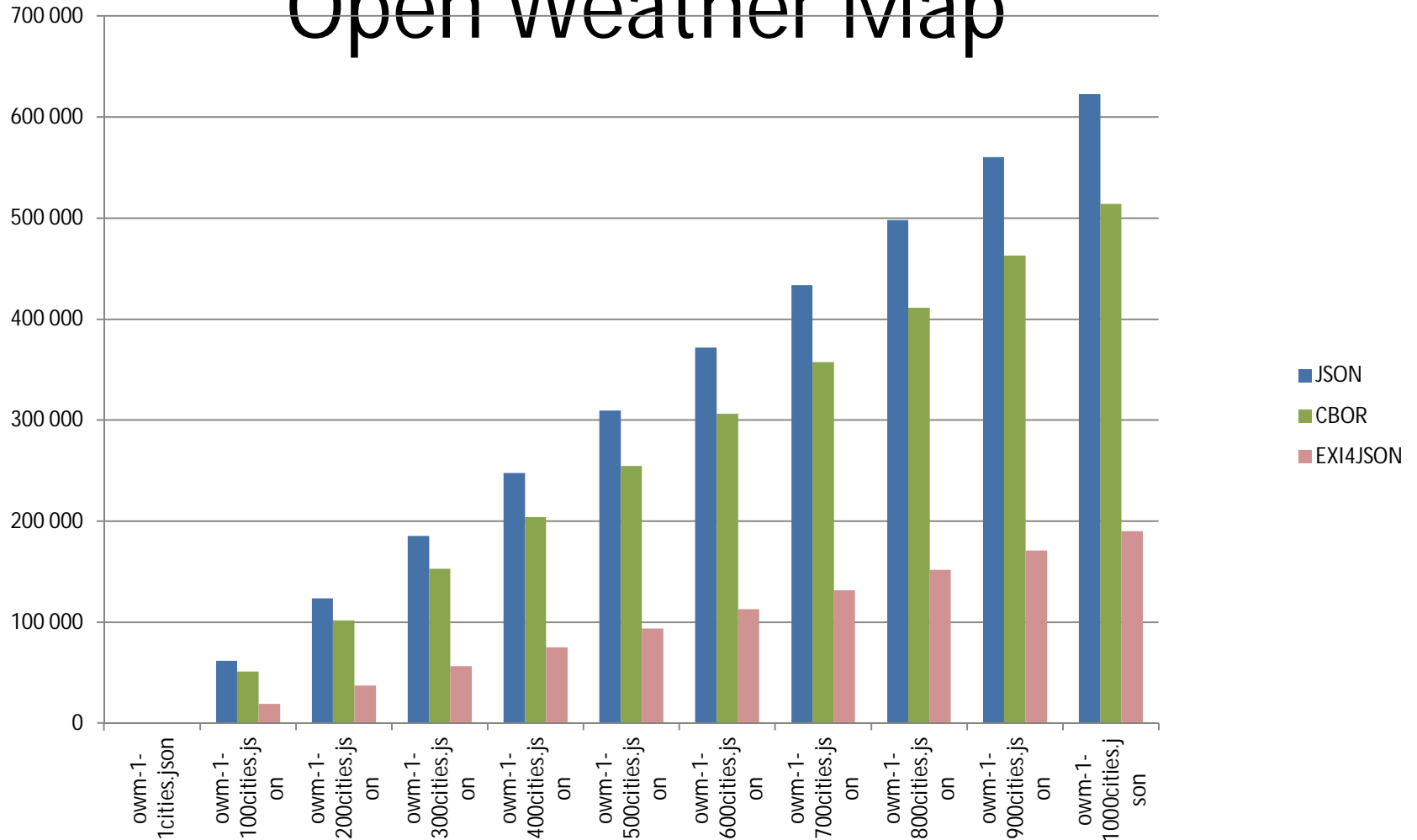
Data compaction measurements

JSON Generator



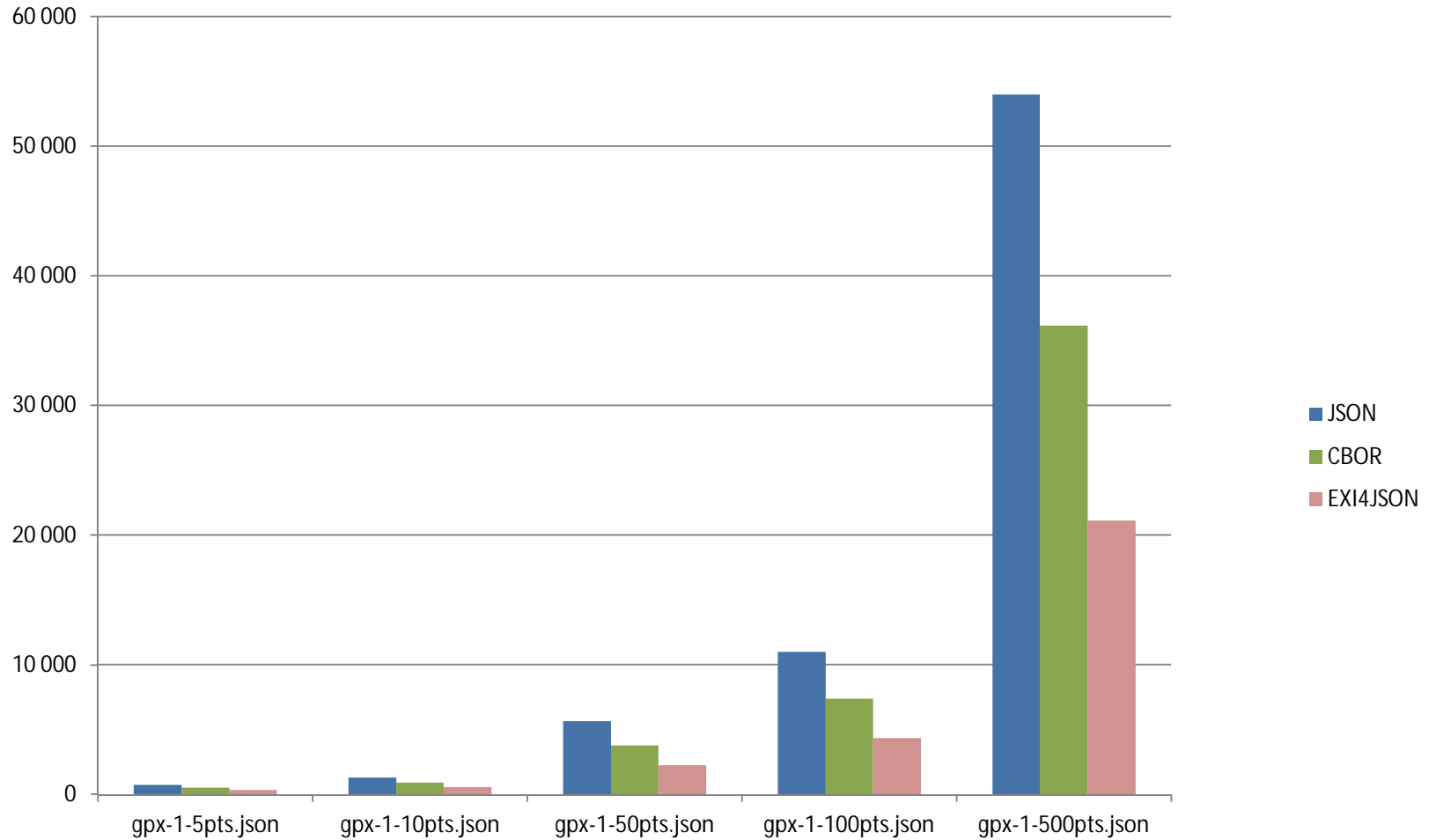
Data compaction measurements

Open Weather Map



Data compaction measurements

GPX



JSON-LD

Thing Description test-files

