

# **Report from the TC39 Secretariat**

*Samina Husain*

*István Sebestyén*

*2023-09-26*

- Overview
  - Summary and Conclusions
  - Invited Experts
  - 2024 Nominations (TC Chairs and TG Chairs)
- Status of ES2023 «Nice PDF» Versions
  - Potential solution proposal
- JTC1 Periodic Review of fast-tracked TC39 Standard ECMA-414 (ECMAScript Suite)
- New Projects and Other Items

## Annex slides:

- List of latest relevant Ecma TC39 and GA documents
- Status of TC39 meeting participation
- TC39 standards download and access statistics
- Next TC39, GA and ExeCom meetings

## **Requirements:**

- “Summary and Conclusion” of each contribution at the plenary meeting should be included both in the Minutes of the TC39 meeting and in the Technical Notes. It is needed for accurate meeting Minutes.
- *It is also convenient for all to see the key points and next steps as agreed by the committee during the plenary meeting.*
- A separate ZIP file with all the presentations of the TC39 meeting contributions.

## **Recommendations:**

- “Summary and Conclusion” text should be completed at the plenary with the support of the contributor and agreement of the committee.
- The process for the Technical Notes after the Bergen meeting was not effective and should be reviewed
  - *How to proceed?*
  - *Discussions in next plenary or at the end of current plenary?*

- Joining Process well indicated on GitHub
- Link to Ecma Invited Expert Form
- In order to manage the list of Invited Experts
  - *All recent Invited Experts have an end-date of Dec 2023. And will need to re-apply in new year.*
- Ideally some will become new members through their Invited Experts

The current Management and ExeCom members can be found here: <https://www.ecma-international.org/about-ecma/organisation/>

Note that any Ecma member can make nominations and that one member can nominate multiple candidates, but each Ecma member can only have in total one elected representative in the Management and in the Executive Committee.

The 2024 Management and Executive Committee will be approved by the December 2023 Ecma GA. We are looking forward to receiving nominations for:

- *The three members of the Ecma Management (President, Vice-President, Treasurer) from representatives of ordinary member;*
- *Up to eight ExeCom members from representatives of ordinary members; and,*
- *Up to two ExeCom members from representatives of the remaining Ecma membership.*

Provide nominations of candidates addressed to [samina@ecma-international.org](mailto:samina@ecma-international.org) and [Isabelle@ecma-international.org](mailto:Isabelle@ecma-international.org)

- *Requested by 13 October 2023.*
- *The list of nominees will be posted no later than 1 November 2023.*
- *The Ecma GA will take place in Cupertino, USA on 5-6 December 2023.*

- The solution for ES2023, was the same as with ES2022
  - *Allen Wirfs-Brock efforts*
  - *Thank you, Allen!!!*
- Allen is not available to continue this in 2024
- For ES2024 and beyond a solution is needed
  - *Allen has provided recommendations and procedures*
  - *What are the next steps?*

- **ECMA-262** is authored on GitHub in a plaintext source format called **Eckmarkup**.
  - *Eckmarkup is an HTML and Markdown dialect that provides a framework and toolset for authoring ECMAScript specifications in plaintext and processing the specification into a full-featured HTML rendering that follows the editorial conventions for this document.*
  - *Eckmarkup builds on and integrates a number of other formats and technologies including Grammarkdown for defining syntax and Eckmarkdown for authoring algorithm steps.*
- **ECMA-262** is currently published in **interactive html** and in a **book-like PDF format**.
  - *html format is built in the process*
  - ***PDF format*** needs every year a manual process
- The yearly download of the PDF version is between 30-40K

# One Proposal: “diploma work” at Bergen University

- **Ecmarkup** should be extended for ES2025 to have built in two alternative output formats:
  - *Interactive html*
  - *Book-like PDF*
- It is proposed that either a “Bachelor's degree” or a “ Master's degree” student (whatever fits better according to the practice of the Bergen University) should be tasked with the following “diploma work”:
  - *Define for the Book-like PDF a set of publication requirements*
  - *Analyze and describe the Ecmarkup process as used by TC39*
  - *Design and implement the requirements into Ecmarkup*
  - *Document and defend both in a “diploma work”*
  - *Pass the result to Ecma for use in the TC39 Ecmarkup process*



## Needs, support and results

- An interested Batchelor/Master Student who is willing to learn and apply the needed skills (like ECMAScript (JavaScript), Node.js, html, pdf, Ecma standard publication template, etc.) to produce a new variant of Ecmarkup.
- Support:
  - *Tutor by the University of Bergen*
  - *TC39 expert who knows Ecmarkup*
- In case of successful implementation Ecma would take over and use the extended Ecmarkup in ES2025 (and beyond...).
- The Batchelor/Master Student could also get credit in the ECMA-262 specification.
- Ecma would be willing to sponsor the work both for ES2025 (and beyond...)

- JTC1 requires that every 5 years a Periodic Review of Fast-Tracked Standard
  - *ECMA-414 (ISO/IEC 22275)*
  - *Voting ended: 03 September 2023*
  - *Pending results*

- [illegible]

# Annex

*(As a reminder....)*

- GA documents provide general Ecma information (policy matters, activities of other TCs, liaison with other SDOs, etc.).
- GA documents are not automatically available to TC39 members. Ask your GA Representative for copy.
- Ecma TC39 documents are the “official” Ecma TC39 documentation within Ecma (both for “long-term archival” and as information to other Ecma TC and GA members).
- It is linked to TC39 as an Ecma TC (includes new formal Ecma members in TC39, status of ES20xx approval in Ecma etc.)

*There are partial overlaps to what is also available on TC39 GitHub*

- Ecma/TC39/2023/030 Venue for the 97th TC39 meeting, July 2023
- Ecma/TC39/2023/031 Agenda for the 97th TC39 meeting, July 2023 (Rev. 1)
- Ecma/TC39/2023/032 Ecma International External Liaison Report for 2022-2023 to ISO/IEC JTC 1/SC 22
- Ecma/TC39/2023/033 Venue for the 98th TC39 meeting, September 2023
- Ecma/TC39/2023/034 Report from the TC39 Secretariat, July 2023
- Ecma/TC39/2023/035 Responses to the Ecma Contribution License Agreement (CLA), 7 July 2023
- Ecma/TC39/2023/036 Slides for the 97th TC39 meeting, July 2023
- Ecma/TC39/2023/037 Minutes of the 97th TC39 meeting, July 2023 (Rev. 1)
- Ecma/TC39/2023/038 Agenda for the 98th TC39 meeting, September 2023

- Ecma/GA/2023/035      Ecma TC39 extensive meeting notes – guidelines for implementation
- Ecma/GA/2023/065      Minutes of the 125th General Assembly, Geneva, June 2023
- Ecma/GA/2023/066      Minutes of the 97th TC39 meeting, July 2023 (Rev. 1)

# TC39 Meeting Participation

Meeting 2019-2023	Total	Local	Remote	Companies
July2019 Redmond	76	46	30	24
Oct2019 New York	70	46	24	26
Dec2919 San Francisco	73	52	21	28
Feb2020Honolulu	58	27	31	23
April2020 Remote	73	0	73	28
June2020 Remote	66	0	66	21
July2020 Remote	76	0	76	28
Sept2020 Remote	66	0	66	25
Nov2020 Remote	62	0	62	22
Jan2021 Remote	95	0	95	27
March2021 Remote	80	0	80	25
April2021 Remote	81	0	81	26
May2021 Remote	74	0	74	27
July2021 Remote	57	0	57	23
Aug2021 Remote	80	0	80	28
Oct2021 TRemote	54	0	54	22
Dec2021 Remote	69	0	69	24
Jan2022 Remote	66	0	66	29
March2022 Remote	92	0	92	30
June2022 Remote	59	0	59	23
July2022 SanFran Hybrid	62	19	43	24
Sept2022 Remote	44	0	44	20
Nov2022 A Coruña Hybrid	62	19	43	23
Jan2023 Remote	68	0	68	27
March2023 Seattle Hybrid	65	20	45	24
May2023 Remote	61	0	61	27
July2023 Bergen	55	32	23	20
Sept2023 Toyko				
Nov2023 Remote				



# Top 5 Download Ecma Standards 1 January – 31 August 2023

Standard	(1 Jan-28 Feb)	(1 Jan-31 May)	(1 Jan-31 Aug)
• ECMA-262 ECMAScript Language Specification	4'778	11'814	17'794
• ECMA-404 The JSON Data Interchange Format	1'972	5'063	7'633
• ECMA-376 Office Open XML File Formats, all parts and editions	1'808	4'699	7'054
• ECMA-334 C# Language Specification	677	1614	2308
• ECMA-335 Common Language Infrastructure (CLI)	607	1492	2323
<b>Total</b>	<b>9'842</b>	<b>24'682</b>	<b>37'112</b>
<b>Total Downloads - All Standards</b>	<b>13'058</b>	<b>32'659</b>	<b>49'341</b>

## Access of Ecma Standards cont.

<b>List of the most popular standards html access in 2023</b>			
ECMA-262 ECMAScript Language Specification edition	(1 Jan-28 Feb)	(1 Jan-31 May)	(1 Jan-31 Aug)
•ECMA-262 5.1th	12'678	33'466	50'339
•ECMA-262 6th	21'479	48'592	73'444
•ECMA-262 7th	8'954	49'426	97'844
•ECMA-262 8th	3'784	9'972	17'501
•ECMA-262 9th	2'087	4'896	7'085
•ECMA-262 10th	2'992	5'836	8'088
•ECMA-262 11th	2'379	5'452	8'433
•ECMA-262 12th	3'401	7'283	10'789
•ECMA-262 13th	13'926	27'934	45'572
•ECMA-262 14th			14'355
<b>Total ECMA-262</b>	<b>71'680</b>	<b>192'857</b>	<b>333'450</b>

# Access of Ecma Standards cont.

<b>List of the most popular standards html access in 2023</b>			
ECMA-402 ECMAScript Internationalization API editions	(1 Jan-28 Feb)	(1 Jan-31 May)	(1 Jan-31 Aug)
•ECMA-402 1st	1'500	3'766	4'392
•ECMA-402 2nd	347	1'213	1'531
•ECMA-402 3rd	39	85	91
•ECMA-402 4th	45	106	127
•ECMA-402 5th	27	62	71
•ECMA-402 6th	16	43	48
•ECMA-402 7th	31	77	113
•ECMA-402 8th	89	217	244
•ECMA-402 9th	549	1'358	1'674
•ECMA-402 10th			551
<b>Total ECMA-402:</b>	<b>2'643</b>	<b>6'927</b>	<b>8'842</b>
•ECMA-419 ECMAScript® embedded systems API editions			
•ECMA-419 1st	141	325	459
•ECMA-419 2nd			300
<b>•Total ECMA-419:</b>	<b>141</b>	<b>325</b>	<b>759</b>

<b>List of the most popular downloads in 2023</b>			
Technical Reports	(1 Jan-28 Feb)	(1 Jan-31 May)	(1 Jan– 31 Aug)
•TR/111 Overview of Universal Archive Disk Format (UADF)	19	52	81
•TR/98 JPEG File Interchange Format (JFIF)	20	52	78
• <b>TR/104 ECMAScript Test Suite 2nd Edition</b>	<b>13</b>	<b>35</b>	<b>54</b>
•TR/109 Class specifications for embedded hardware components	8	17	31
•TR/110 Recommendations and best practices for scripts on connected sensing devices	7	16	28
•TR/84 CLI - Information derived from Partition IV XML file		65	
<b>Download of Ecma Memento 2023 *</b>	29	120	169

**\*External** download of the "public" version (without personal addresses).

**Internal** distribution reaches about some 600 Ecma member participants. Sent out at the beginning of the year per email with the full internal version (using mailing lists).

**Print copy** (done internally) on demand per post. Low numbers.

# Download of Ecma Standards

## 1 January – 31 August 2023

Standard	Download
• ECMA-262 ECMAScript Language Specification	17'794
• ECMA-404 The JSON Data Interchange Format	7'633
• ECMA-376 Office Open XML File Formats, all parts and editions	7'054
• ECMA-335 Common Language Infrastructure (CLI)	2'323
• ECMA-334 C# Language Specification	2'308
• ECMA-48 Control Functions for Coded Character Sets, 5th edition	726
• ECMA-74 Measurement of Airborne Noise Emitted by ICT Equipment	708
• ECMA-388 Open XML Paper Specification	647
• ECMA-418 Psychoacoustic metrics for ITT equipment	612
• ECMA-402 ECMAScript Internationalization API	467
• ECMA-422 C# Specification Suite	456
• ECMA-370 TED The Eco Declaration	424
• ECMA-414 ECMAScript® Specification Suite	404
• ECMA-119 Volume and File Structure of CDROM for Information Interchange	352
• ECMA-408 Dart Programming Language Specification	266
• ECMA-363 Universal 3D File Format, 4th edition	244
• ECMA-340 Near Field Communication Interface and Protocol (NFCIP-1)	220
• ECMA-6 7-Bit Coded Character Set	194
• <b>Total downloads</b>	<b>49'341</b>

# TC39 Plenary Schedule 2023

Dates	Location	Host
2023-09-26 to 2023-09-28	Tokyo, Japan	Bloomberg
2023-11-27 to 2023-11-30	<i>Remote: "SF"</i>	

- **2024 meeting (100th)**
- *6 meetings per-year*
- *3 remote, 3 hybrid (one US, one Europe, one Asia)*
- *Remote meetings are up to four days  
...and sometimes we rejoice when we can end early and claim a day back*
- *In-person meetings are three days  
...to permit Monday/Friday as travel days*

- **GA 126:** 5-6 December 2023 (Cupertino, US, hosted by Apple)
  - *TC53 meeting co-located on the 6th*
- **GA 127:** 26-27 June 2024 (Geneva, Switzerland)
- **GA 128:** 11-12 December 2024 (US, TBD)

## **ExeCom:**

- **4-5 October 2023**, Geneva
- **24-25 April 2024**, Geneva
- **1-2 October 2024**, Geneva
- *Starting at 9:00. TC Chairs are invited to report on their activities.*

# Thank you!