

**INTERNATIONAL ORGANIZATION FOR STANDARDIZATION  
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ISO/IEC JTC 1/SC 29/WG 11  
CODING OF MOVING PICTURES AND AUDIO**

**ISO/IEC JTC1/SC29/WG11  
M42083  
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**Source:** EPFL et al.  
**Status:** Proposal  
**Title:** Current status of MPEG-G reference software implementation  
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## **1 Introduction**

This document reports the current status of reference software of MPEG-G technologies hosted on gitlab-scistimm.epfl.ch server.

## 2 Status

### 2.1 Part 1

Main component	Sub components	Development and integration	Test and validation
Part 1	Library	Implemented. The reference software has been kept aligned with the standard.	In order to assert conformity with the standard, the library must be tested with reference files.
	Example program	Implemented. Example program to simplify integration.	

### 2.2 Part 2

Main component	Sub components	Development and integration	Test and validation
Raw Reference parser		Not implemented	
Parameter Set parser		Implemented	Not tested
Access Unit parser	Bit-stream parser	Implemented	Preliminary unit-tested
	Data-class generation	Implemented	Not tested
	Descriptor iterators	Implemented	Not tested
Sequence decoder	Class P decoder	Ported from GenomSys codebase, and aligned to standard document	Not tested
	Class N decoder	Not implemented	
	Class M decoder	Not implemented	
	Class I decoder	Not implemented	
	Class HM decoder	Not implemented	
	Class U decoder	Not implemented	
MPEG-G record output		Not implemented	

Main component	Sub components	Development and integration	Test and validation
Quality values	Library and test program	Being aligned with the specification, planning to be ready for integration after Gwangju meeting. It will be available as a library and test program.	
Read names	Library and test program	Being aligned with the specification, planning to be ready for integration after Gwangju meeting. It will be available as a library and test program.	Though conformance with currently available reference test material was conducted, a more thorough conformance should be conducted after its integration into the reference software
Entropy decoder	Library and test program	As per CE5, currently being aligned among technology proponents after their joint specification of decoder configuration and decoding process. More discussions among proponents are expected to take place in Gwangju on alignment to the specification and integration into the reference software.	Each proponent has their technology software implemented as a library + test program, which were used to establish conformance with currently available reference test material. A follow up conformance with the reference test material will be conducted again.
Various	Cmd-line interface	<p>Implemented lib to specify, manage, and parse options from cmd-line.</p> <p>Missing:</p> <ul style="list-style-type: none"> <li>• Finalize option specification, and integrate in part 1 / part 2 processing.</li> <li>• File parser (if required)</li> </ul>	Preliminary unit-tested