

THE MPEG-G STANDARD

An open standard for genomic information

Why genomics needs a purpose-built representation — and how ISO/IEC 23092 delivers compression, selective access and interoperability in one format.

THE PROBLEM

Genomic datasets are growing faster than storage budgets. Legacy formats (FASTQ, BAM, CRAM) were not designed for random access, rich metadata or transport, forcing labs into custom, non-interoperable tooling.

THE MPEG-G APPROACH

MPEG-G organises reads into access units with descriptor streams, enabling region-selective decoding, native metadata, encryption and APIs — standardised by ISO/IEC so any compliant tool can read any compliant file.

OUTCOMES

Smaller archives, faster region queries, and a genuinely interoperable ecosystem where storage, analysis and sharing tools are decoupled from one another.

KEY CAPABILITIES

- ISO/IEC 23092 international standard
- Access-unit based representation
- Region-selective random access
- Native metadata & encryption
- Defined transport & file formats
- Vendor-neutral interoperability

Standard	ISO/IEC 23092
Parts	Transport • file • API • reference
Status	Published
Royalty	See standard terms