GenomSys

MPEG-G Codec Suite

The GenomSys MPEG-G Codec Suite is a collection of software tools to process genomic data compliant with ISO/IEC-23092 genomic data standard (MPEG-G). The tools enable organizations to implement the standard and leverage its benets by encoding and decoding genomic data; they also include source code examples, a comprehensive user manual, and additional software to transcode from/to legacy formats and integrate functionalities into existing applications and pipelines. Our Codec Suite is CE Marked as in-Vitro Diagnostic Medical Device according to 98/79/CE directive and hence approved for clinical-grade diagnostic purposes.

High Compression[1]

This results in significant size benefits enabling cost savings for organizations handling large volumes of genomic data.

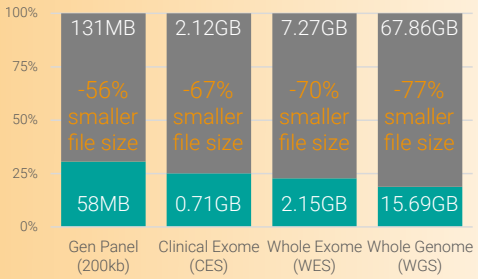

Figure 1 - Comparison of file size for legacy format dataset FASTQ (dark grey) and MPEG-G (orange). The international genomic Standard compression benefit can reduce genomic datasets with growing size to more than 70%.

Rapid Selective Access[1][2]

Dramatically faster data access time reducing latency for geneticists running the analysis.

Figure 2 - Comparison of processing time – sorting, indexing and accessing – for legacy format dataset in BAM (light grey) and MPEG-G (orange) for accessing the coding regions of the CFTR gene. The MPEG-G format can reduce the initial accessing time by at least 90%.

Wide Interoperability

Non-proprietary ISO-defined international standard enables everyone to write its own interoperable code in a single unified format for all genomic-connected file types, providing independence from any company's strategy or continuing support as well assuring the highest data integrity and interoperability.

ISO ISO/IEC 23092

Built-in Security

Built-in security elements strengthen privacy protection of sensitive individual genomic data: possibility to encrypt natively within the file and grant different access permissions by intervals.

Contact Us!

Should you be interested in learning more about GenomSys, please do not hesitate to reach out to us by phone +41 21 691 10 00 or email info@genomsys.com.

[1] The BAM file was processed with the program samtools 1.11 using the command 'samtools view -@ 4' for 27 regions of the *CFTR* gene.

[2] Region of the server is Frankfurt. Source: https://aws.amazon.com/ec2/pricing/on-demand/ as of 25th March 2021

[3] Prices from Amazon EC2 On-Demand Pricing list. Averaged price for processing services General Purpose - Current Generation with machine (vCPU of 32 and memory space of 128GB).

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