**INTERNATIONAL ORGANISATION FOR STANDARDISATION**

**ORGANISATION INTERNATIONALE DE NORMALISATION**

**ISO/IEC JTC 1/SC 29/WG 11**

**CODING OF MOVING PICTURES AND AUDIO**

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| **Title** | **Presentations of the MPEG WS in Shenzhen: MPEG-G - a standard to compress DNA reads** |

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# Purpose

This document collects the slides of the presentations made available for publication presented at the owrkshop: "MPEG-G - a standard to compress DNA reads” held in Shenzen on the 13th of October 2018.

The essential information and the full program of the WS is reported below.

# Detailed program

**Organized by MPEG**



**MPEG-G - a standard to compress DNA reads**

**13:00 - 18:00, 13th October 2018**

**Shenzhen (CN)**

A workshop on applications of genomic information processing has been held on 13th October 2018 one day after the 124th MPEG meeting.

The Workshop intended to provide an overview of MPEG-G the new ISO standard on the compression of and optimized access to genomic information, its impact on the relevant industry, on the various related standardization initiatives, use cases, sequencing technology evolution and perspectives for standardization in other –omics fields.

Specifically the workshop addressed:

* An overview of the ISO genomic compression standard and its new features and performance
* The challenges for the generation and management of very large volumes of genome sequencing data
* The status and future perspectives of sequencing technology and genomic data generation
* The vision of genomic information storage and processing on the cloud
* The vision of further standardization objectives in the –omics fields

The workshop was open to the public.

**Date:**

13th October (Saturday), 2018

Program: 13:00 – 18:00

**Venue:**

**2F Function Room, Tencent Building,**

**No. 10000 Shennan Avenue, NanShan District,**

**Shenzhen , Guangdong province, China**

**广东省深圳市南山区深南大道10000号腾讯大厦二楼多功能厅会议室**

**Organizing Committee:**

Joern Ostermann (LUH), Rongshan Yu (AGINOME Scientific), Claudio Alberti (GenomSys), Tom Paridaens (imec and UGent)

**Final Program**

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| --- | --- | --- | --- |
| **Start** | **End** | **What** | **Who** |
| 12:30 | 13:00 | Registration |  |
| 13:00 | 13:10 | Welcome & workshop goals | Leonardo Chiariglione (MPEG Convener) |
| 13:10 | 13:40 | "An overview of the MPEG-G standard for the compression and processing of genomic sequencing data" | Marco Mattavelli (EPFL, Switzerland) |
| 13:40 | 14:10 | “An overview of standardization progress in genomics data” | Yong Zhang (ISO/TC 276/ WG2 & WG 5 Convenor) |
| 14:10 | 14:40 | “A Review of Compression Technology of Genomics Data” | Yong Zhang (BGI Big Data Center) |
| 14:40 | 15:20 | “GSA: Genome Sequence Archive, in China” | Yanqing Wang (BIG Data Center, BIG, CAS) |
| 15:20 | 15:30 | Short presentation of demos | Demonstrators companies |
| 15:30 | 15:50 | Demo session and Coffee Break |  |
| 15:50 | 16:20 | “State-of-the-art and future of NGS, a standard perspective” | Ming NI (BGI-Shenzhen and MGI) |
| 16:20 | 16:50 | “Constructing an open ecosystem for bioinformatics and genomic big data” | Chen Shifu (Haplox) |
| 16:50 | 17:20 | “Practice and Challenges of 20,000 human WGS data analysis on BGI Online” | Kang FANG (BGI-Online, BGI*)* |
| 16:50 | 17:20 | Panel discussion, Q&A and concluding remarks | All speakers |
| 17:20 | 18:00 | Demo session continues |  |

Some presentations kindly made available by the speakers are provided in annex.