

## Minutes

### #AthTech 2018

3<sup>rd</sup> Annual Athletics Data Conference– Gijón (Spain), 9-11 October 2018

#### Day 1: Tuesday 9<sup>th</sup> Oct

#### Welcome and Introduction

##### Presentation by Nicolas Launois, European Athletics

- Motivation for AthTech Athletics Data Conference:
  - Development of a global standard for athletics data
  - AthTech as a platform for sharing of ideas and solutions
- Background: Data collection (i.e. for national ranking or during competitions) today is comprised of manual, repetitive, time-consuming and error prone manual work, done mostly by volunteers. It is difficult for national federations to collect results outside of their country, hence the need to globalise the result collection
- Currently there are different systems for collection and sharing of athletics data in use within the Member Federations:
  - Many have no integrated system for storing and sharing athletics data. Work is done manually with help of spreadsheets and data is shared via email
  - In some cases, more elaborate databases are used. They often use a proprietary format and lack powerful data sharing or broadcasting options
  - Few experts have advanced systems and sharing options for athletics data
- In a joint effort with experts from the athletics community and the World Wide Web Consortium (W3C) an open data standard was developed
  - It covers the full cycle from data entry to publishing of results
  - Use cases are rankings, real-time results and athlete profiles
  - Open data standards help to reduce resources needed for data processing
- European Athletics is developing the whole software suite OpenTrack. It is a competition management, license management and competition results software which enables federations to grow their fan base and seamlessly manage competitions through specialized software. It includes the following:
  - All aspects of the administration of the Federation: license management, club management, management of entries...

- Competition Management: it allows meeting organisers to efficiently deal with the complexities of a full-scale track and field events.
- Current users: EST, CYP, MLT, BLR. Interested users : BEL, TUR, SRB, CRO, BUL, Balkans...
- European Athletics is subsidising this initiative by powering OpenTrack and making it possible for Member Federations to use it through the European Athletics Support Programme
- Next steps: rollout within Member Federations

## Keynote – IAAF Digital Strategy

### Presentation by An Dang Duy, IAAF

#### Digital Strategy

- Competing for attention and gaining audience are major challenges for IAAF
- Transformation of IAAF from corporate rule maker to an inspiring consumer facing brand
- Goals are making athletics: more engaging, more immersive and more connected
- Engage new audience via story telling:
  - Enhance data visualization (contextualize athlete performance)
  - Augmented reality applications
  - Personalized fan journey, provide fun facts / anecdotes and creating stars
- Driving elite athletics by using sensors and tracking devices
- Digital transformation journey is beneficial for fans and athletes

#### IAAF universal ID

- Unique login and password for connection with athletics ecosystem
- Open for Member Federations, athletes, vendors, ...
- IAAF universal ID can be used to create a tailored fan journey: Social login, tailored content, promotion of interesting events, ticketing, ...

## Practical Data Sharing and the OpenTrack Data Format

### Presentation by Andy Robinson, OpenTrack

- Pain points: Currently, work with athletics data (mostly via spreadsheets and email) is frustrating, inefficient and time consuming
- OpenTrack goals:
  - saving time for volunteers

- generate and promote better results output
- promote open standards
- The three pillars for the OpenTrack initiative are: open data, open standards and open source  
→ everyone can play and explore data
- Problem: assigning people unique IDs (→ might be addressed with the IAAF universal ID)
- OpenTrack data (JSON) covers the whole state of a competition (reference / statistics databases, competition management, results broadcasting)

### **Presentation by Martin Alvarez-Espinar, CTIC/W3C Spain**

- Activities are open for everyone and publicly available on GitHub: [w3c/opentrack-cg](https://github.com/w3c/opentrack-cg)
- Proposed OpenTrack data model contains:
  - Abstract model (personal details, competition, team, discipline, performance, ...)
  - Classification schemas (date, results, distance, competition feature type, ...)
  - Conceptual model (Relation between entities, abstract / universal semantics, possibilities to extend, ...)
- Current problems and proposed solutions:
  - Taxonomies for categories (hundreds of types), i.e.: ID, type, minimum age, gender, ...
  - Units and codes, i.e.: type, value, unit code
- Open Data format is flexible and expandable, its possible application includes:
  - Publishing of results
  - Competition and calendar management
  - Geo information (tracks & venues)
- It's based on Semantic Web technologies (JSON-LD, JSON linked data) and is therefore easy understandable for both machines and humans
- Google can read and interpret data based on the OpenTrack format (i.e. from AthTech website <http://athtech.run/>)

### **GDPR - Where next?**

#### **Presentation by David Brunson, First Rate Exchange Services and discussion with audience**

#### **Post GDPR observations**

- General observations
  - GDPR (General Data Protection Regulation) is mainly business-to-consumer focused
  - Sport is not the target; however, EA activities are in scope of GDPR
  - Legal basis for holding personal data: legitimate interest

- Existing PECR (2003) rules still apply: soft opt-in allows limited marketing of closely related products (active opt-in is required in case of marketing campaign for targeted products)
- Controversies, i.e. on different interpretations of “truly individual consent”
  - What does it mean for performance records?
  - In real world situations: Published/broadcasted data is not subject to control of the individual
  - IAAF can take a stance and influence interpretations of the law
- Opportunity for sport affinity marketing (In English athletics 65% opt-in rate)
- Sports are a public good, aligned with government goals (i.e. help fighting obesity)

### Experiences with GDPR / Feedback from Member Federations

- GAISF (Global Association of International Sports Federations) has a dedicated website on GDPR: <http://gdpr.sport/>.
- “You are accountable whether you like it or not”
- Difficult to not become a soft target → no insurance for non-compliance
- IAAF Universal ID may give opportunity to collect data in a compliant way
- Precautions needed to work with data
  - Special attention regarding vulnerability of PCs from people working with data
  - Regular security updates needed
  - Data needs to be protected, deleted from time to time
  - Reporting of intrusion/hacking
  - Sometimes this means tedious work: update website, getting all consent forms (bad response rate partly because people do not open emails, ...)
- Privacy policy is an attitude: Not giving away personal data, ...
- Despite EU-wide standards there are different local regulations/interpretations: UK, Sweden, Ukraine, ... → Getting the right lawyer may be very beneficial
- Benefit of GDPR
  - Framework for working with personal data
  - (at least theoretically) no need to read law for each country
- Open questions regarding opt-in for children (>16 y/o no problem, 13-16 y/o there may be solutions, < 13 y/o parental consent needed)

## Cutting-Edge Technologies for Data Management in Sports

### Blockchain and sports

#### Presentation by Luis Meijueiro, CTIC Technology Centre

- Using Blockchain technology for democratizing sports and health data
- “Data that you can trust”: Blockchain keeps immutable, decentralized log of every transaction
- Different platforms and advancements in Blockchain technology
  - 2009 Bitcoin
  - 2015 Ethereum
  - 2016 Corda
  - 2017 Quorum
  - 2018 aeternity
- Practical applications (mostly when multiple actors and distrust or disintermediation is an issue)
  - Logistics (control, tracking, ...)
  - Medical & Health records (dyno.io, Beat.org, Medrec, modeum.io, ...)
  - Public administration

### Humon.io

#### Humon hex – presentation by Miguel Galera, Humon

- Real-time muscle oxygen wearable / lactate measurement
- Prescribes optimal pace, workout intensities, warm ups and recovery

### Timing Systems

#### Presentation by Carlos Galindez, AGM Soft

- Video distance measurement for long jump
  - 2 cameras, 1 laptop and calibration markers on the field
  - Calculation of change in before and after photos
  - 1mm accuracy
- Instant replay and registration

## Analysis of publicly available data for journalists

### Presentation by Wenceslao Bover, Atos

- Atos sport big data for journalists
- Analysis of publicly available data from social media
- Identification of topics of interest
- Combination with data from competition

## Real-World Technologies in real scenarios

### AthTech Run

- A relay race with different number of athletes depending on their gender and age
- Competition as a technology showcase
- Exhibition of products and services by training device makers, timekeeping service providers and data processing experts
- Results of the race provided by pBEST: <http://espinr.ddns.net/races/display-relays/y5re3t2bgdhpBWmND/RFID01?rows=15>

Day 2: Wednesday, 10<sup>th</sup> Oct 2018

### AthTech run results

#### Timing

##### Presentation by Elliot Tabraham-Dowers, race result AG

- Passive timing (passive RFID chip placed in bib number) during the relay race with timing sensor hardware from 321go. Analysis of racing results and scoring with RaceTec software
- Active timing system by race result (ActivePro Transponder, Active Extension Box)
- Discussion of passive vs. active systems and differences in speed, accuracy and price

#### Humotion – Training Software

##### Presentation by Johannes Rosenmoeller, Humotion GmbH

- SmarTracks Timing Gates Mobile: magnetic gates placed on the running track for run analysis
- Measurement of step length, split interval time, number of steps, ...

## ActivloTy / pBest - Low cost timekeeping / real-time results display (Prototype)

### Presentation by Martin Alvarez-Espinar, CTIC/W3C Spain

- Timekeeping platform that enables efficient sports timekeeping based on open standards (Semantic Web, JSON-LD, OpenTrack vocabularies, MQTT messaging protocol)
- Design is modular and focused on low-cost devices (Raspberry Pi, Bluetooth keypad, RFID antenna)

### Other Technologies

- Humon.io – Real-time muscle oxygen wearable / lactate measurement

## Calendar Management

### Presentation by Andy Robinson, OpenTrack

- Calendar management is challenging on both international and local level
- On the international level (IAAF, EA) it is organized by the planning conference
- On the local level there is no central authority to harmonize the planning process
  - High coordination effort due to mutual regional holidays and limited number of favorable weekends
  - High effort due to rescheduling
  - Harmonized planning process could enhance participation
- Transparency on local level about other events could help to solve these problems
- The proposed solution is to use the OpenTrack data model to announce events on the web and to feed publicly available databases
- Open questions remain, i.e. classification of athletic events (high level vs. mass participation)
- Call for participation: help to seed an open database with events!

## Venues and Facilities

### Fred van Wijk (Polytan GmbH) and Johannes Rosenmoeller (Humotion GmbH)

- Polytan GmbH is the largest certified track manufacturer
- In cooperation with Humotion built-in sensors (SmarTracks) in tracks are provided for training analysis

### Presentation by Andy Robinson, OpenTrack

- OpenTrack venue database (<https://data.opentrack.run/v/>), using the OpenTrack data model

- Registering of venues and tracks possible
- Can be used for searching a track or venue in a certain region and can be integrated in other websites

## Reports from Member Federations

### Anacleto Jimenez, Royal Spanish Athletics Federation

- Proprietary Intranet solution (Atos) used nationwide by the athletics community (clubs, official, ...)
- Harmonized data format for ranking and results display with less effort
- Unique IDs for athletes, clubs, events and venues
- Mandatory use to participate in Spanish athletics competitions and national rankings

### Mark van Tubergen (Atletiek.nu)

- Atletiek.nu is the official provider of the Dutch Athletics Federation
- Cloud based competition management software used by 95% of all local clubs
- Nationwide competition calendar, real-time league standings
- Easy to operate with native app for volunteers (asynchronous sync with the cloud possible)
- Main challenge to overcome: how to collect results from Dutch athletes competing abroad

### Filip Moterski, Polish Athletic Association

- Current situation:
  - Average age of judges within Polish Athletic Association approx. 60 years
  - 75% of technical delegate positions are about to be renewed
- Advances in technology were accompanied with team-building efforts, seminars and workshops

## Competition Management

### 2018 Highgate Harriers Night of the 10,000m PBs

- Use of active timing (race results), data visualizations (OpenTrack) together with photo finish
- Video of the event: <https://youtu.be/knapAmrT9qI>
- OpenTrack data: <https://data.opentrack.run/x/2018/GBR/not/>



## **Sport journalism/Statistics**

### **Mirko Jalava and Jukka Moisio, Tilastopaja**

- Many way to highlight and put the data into perspective
  - Comparison of performances through the years comparing European athletes versus the rest of the world
- With correct and well compiled data, more content can be generated automatically, to be reused be media, especially social media. By comparing more data, content generation is based on:
  - More historical facts:
  - Analyse the age (youngest, oldest), the other national/international athletes at the same age, the progression, individual and national medal streak, quality of the performance besides the medal, etc...

### **Phil Minshull, Spain Sport Services**

- How to tell a story using your data
- Use data across age, participation, nationality
- Pick your audience, be selective