



# PANEL #3

VENICE  
April 2024

## DataSys 2024 & ComputationWorld 2024

**Theme:**

**Readiness - Raising of Digital  
Technologies**



# CONTRIBUTORS

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April 2024

## Moderator

Prof. Dr. Mannaert Herwig, University of Antwerp, Belgium

## Panelists

Prof. Dr. Hans-Werner Sehring, NORDAKADEMIE gAG, Germany

Dr. Geert Haerens, Faculty of Applied Economics Antwerp University, Belgium

Dipl. Ing. Andrey Vukolov, Elettra Sincrotrone Trieste, Italy

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Prof. Dr. Herwig Mannaert, University of Antwerp, Belgium



# Chair Position

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*The goal of technology should be to contribute to society,  
to improve human prosperity and well-being.*

- **Beware of technology push**
  - **Technologies are a means to an end, not an end.**  
Example: “we need data engineers”, “how will you use AI”
  - **Technologies should be allowed to mature.**  
Example: initial flaws of batteries or solar panels should be corrected before massive rollout
- **Beware of technology hubris**
  - **Technologies are agnostic with respect to their use.**  
Example: you cannot make a surgical knife that is unable to harm someone.
  - **Technologies cannot be made fully waterproof secure.**  
Example: in the physical world, you cannot search everyone entering a room either.



Herwig Mannaert  
University of Antwerp



# Chair Position

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*The goal of technology should be to contribute to society,  
to improve human prosperity and well-being.*

- **Beware of business models**
  - **Misalignment of customer interest and supplier business.**  
Example: IT projects are often cost+, licenses thrive on vendor lock-in.
  - **Illusion of ‘free lunch’ is prominent in digital platforms.**  
Example: if a news platform is free, you are the product.
- **Beware of role of academia**
  - **Misalignment of evaluation methods and societal mission.**  
Example: publish instead of innovate, ‘funding is output’, degree-based subsidies.
  - **Delicate balance between expert role and funding targets.**  
Example: careers of ‘impartial experts’ often depend on industry funding.



Herwig Mannaert  
University of Antwerp



# Panelist Position

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- **Science perspective:**  
look at problems, not possibilities that arise from innovations
  - **Excitement about new techniques or technologies must not lead to doing “just something”**  
Example: generative AI is supposed to do the creative (fun) part, human beings are doing the (tedious) background research and validation  
→ *use technology as the “extension of man” [McLuhan], not a substitute*
  - **Application areas may differ from area where solution was found**  
Example: Blockchain ≠ Cryptocurrency  
→ *choose from available technologies to solve a problem, not problems that can be solved*



Hans-Werner Sehring  
NORDAKADEMIE



# Panelist Position

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- **Science perspective: Be open to innovation, give new ideas a chance**
  - **Current innovations from industry / startups rather than from science**  
Expectation that everything is production ready from the start  
→ *take your time for experiments, do not give in to wishful thinking*
  - **In commercial settings, monetarization is the first objective**  
New findings were directed by some business need  
→ *consider applications even when there is not obvious way to earn money*
  - **Commercial developments are sometimes rejected by the scientific community**  
Legal and ethical concerns must direct, but not limit experimentation  
→ *do solve the problems that arise, but do not make up new ones*



Hans-Werner Sehring  
NORDAKADEMIE



# Panelist Position

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- **Why do we need decentralised reproducible IDs for the data?**
- Global endeavours may create trillions of necessary PIDs for only the research artifacts that will be created during the next decade.
- Reproducibility becomes an essential part of the persistent identification workflow as the non-reproducible identifiers make it impossible to build the system that is sustainable to both controlled and non-controlled content drift.
- In centralised PID systems, the persistence of the actual addressed data is yielded to the publisher. In this case the prevalence of rotting links seems impossible to cope with.
- Human intervention based on social contracts is unacceptable as a part of minting pipeline.
- **What would we expect from the decentralised PID system?**
- Open participation - access the storage backend grants redundancy for every participant.
- Distributed ledgering. The special flavour of blockchain guarantees all the versioned records are linked in immutable manner.
- FAIR compliance. dPID as current implementation facilitates most of the FAIR Principles and Guidelines, moving the data sharing towards the linked knowledge management.



Andrey Vukolov  
Elettra  
Sincrotrone  
Trieste



# Panelist Position

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## Digitalization in the orthodontic field

### ▪ *Before the first consultation*

Train and learn with IA/VR



Dental and body anatomy



Mastery of gesture



Distance continuing education



Discussion between practitioners

2LPN  
Hospital of  
Reims

Practitioner

Patient

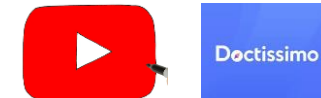
Check google reviews



Take an appointment



Search informations on websites







# Panelist Position

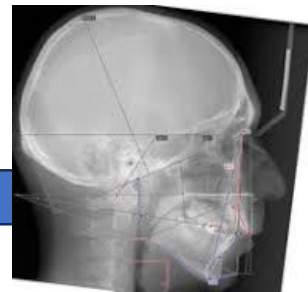
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## Digitalization in the orthodontic field

- *Treatment plan and diagnosis*



Dental arches  
numerical impression



RX analyzes



Digital dental arches analyzes  
simulation of results

Digital medical record

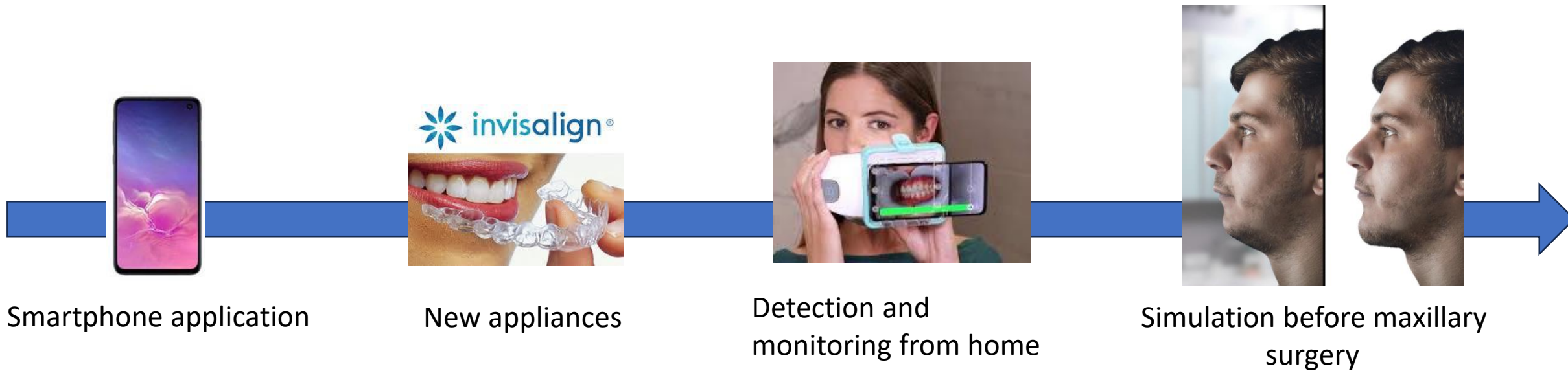


signing of documents



## Digitalization in the orthodontic field

- *During and after orthodontic treatment*





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## Digitalization in the orthodontic field

New digital devices are developing very quickly ...  
... sometimes without evaluation of the needs.

The digital care environment change faster than behaviors

Digitalization in the health sector creates fears and proud

IA vs human RX interpretation/surgery or orthodontic results vs reality show  
differences

Digital hacking +++

Data retention problem

**=> New legal and ethical issues**





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## ■ The Dark Side of the Gen-AI-Force

- **Luke:** Is the dark side stronger?
- **Yoda :** No, no, no. Quicker, easier, more seducti



## ■ Human brain ready for Gen-AI?

- AI vs AI: Artificial Intelligence vs Authentic Intelligence .
- Fast System vs the Slow System.
- Which one do we want to prevail?
- Which one to train?



Geert Haerens  
UA – AMS  
Engie

## ■ Human brain is already under stress

- GEN-AI feeds that stress even more.
- Who is becoming the automaton?
- Dixit CEO Google Belgium “We will adapt to Gen-AI”
  - Technology in service of the people or people in service of the Technology?

