

PSYCHOLOGICAL SELECTION OF PILOTS

A „Guru’s Talk“

Hans-Juergen Hoermann, PhD

EAAP Selection Seminar, Amsterdam, 28th September 2023

*Improving Health Span
in Space and on Earth*



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EAAP

EUROPEAN ASSOCIATION
FOR AVIATION PSYCHOLOGY



Safer Ops

Human Factors Interfaces



OVERVIEW

- Introduction
- Value of selection
- Job analysis
- Biggest changes
- Most difficult and best issues
- Stupidest thing
- Lessons learnt
- Q&A

INTRODUCTION



VALUE OF SELECTION

- Selection is not always a pleasant experience
- Safety implications of selection ?
- If no psychological selection systems were in place...
 - Hiring practices could become arbitrary
 - Training and capacity problems could arise
 - Higher levels of individual stress and long-term psychosomatic disorders



(PROSPECTIVE) JOB ANALYSIS

- Selection decisions are long-term predictions
- Selection systems often rely on historic data
- Examination of future scenarios is needed
- Example: DLR's Aviator2030-project

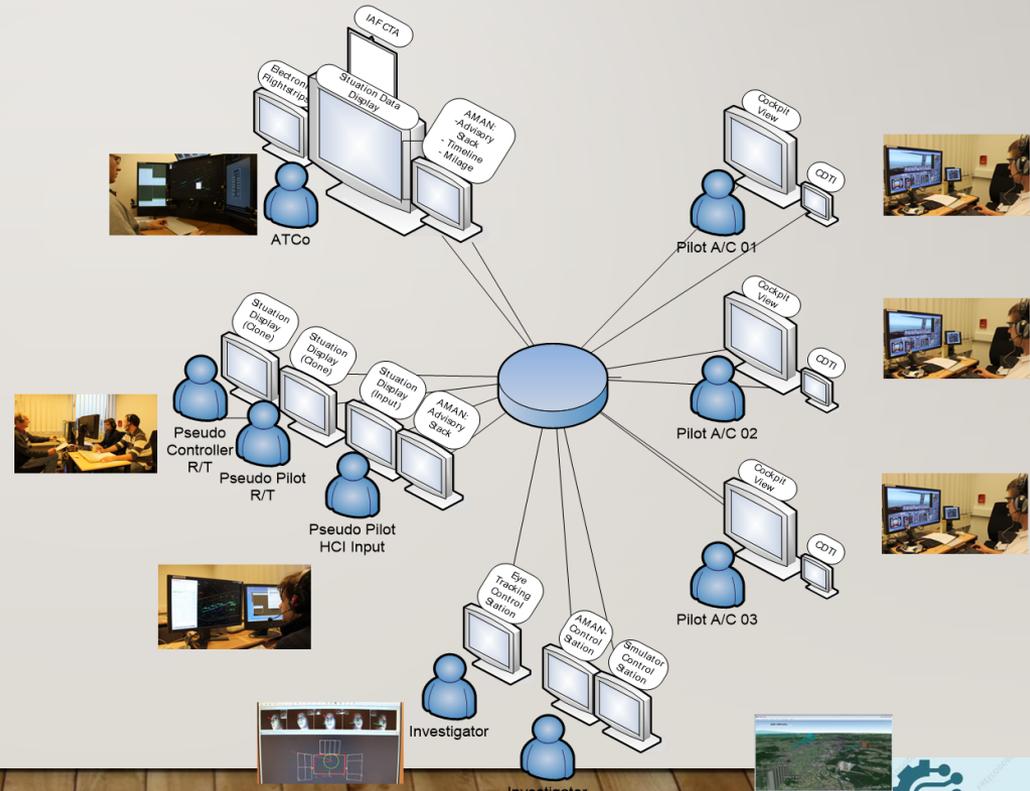




PROSPECTIVE JOB ANALYSIS

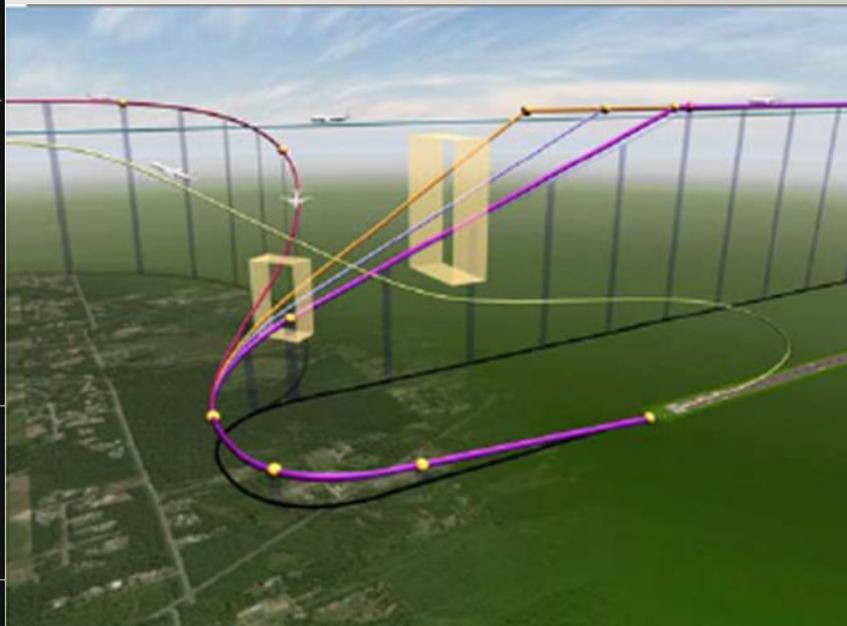
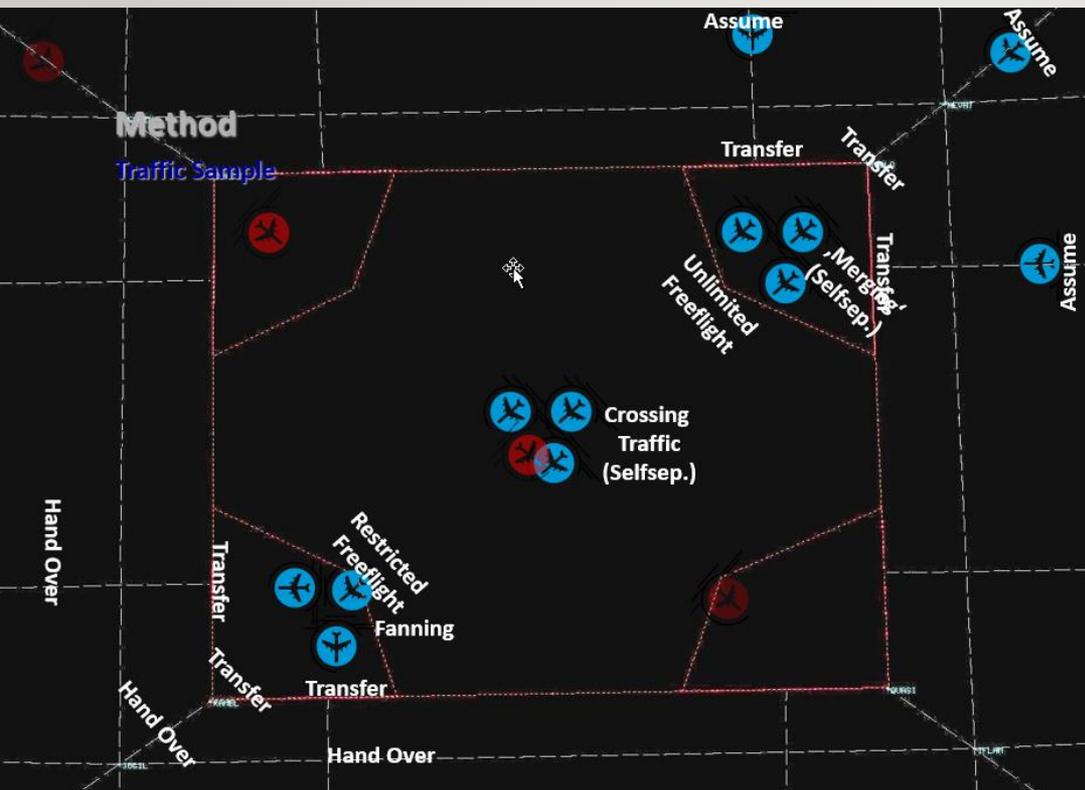


- AviaSim Simulation Platform





PROSPECTIVE JOB ANALYSIS





BIGGEST CHANGES

Drivers

- Automation
- CRM, NOTECHS
- Capacity issues
- Regulation

Developments

- Computerization
- Assessment Center
- Distributed Teams
- Accreditation process



BIGGEST CHANGES

- TECHNOLOGY -





BIGGEST CHANGES

- COMPUTERIZATION -



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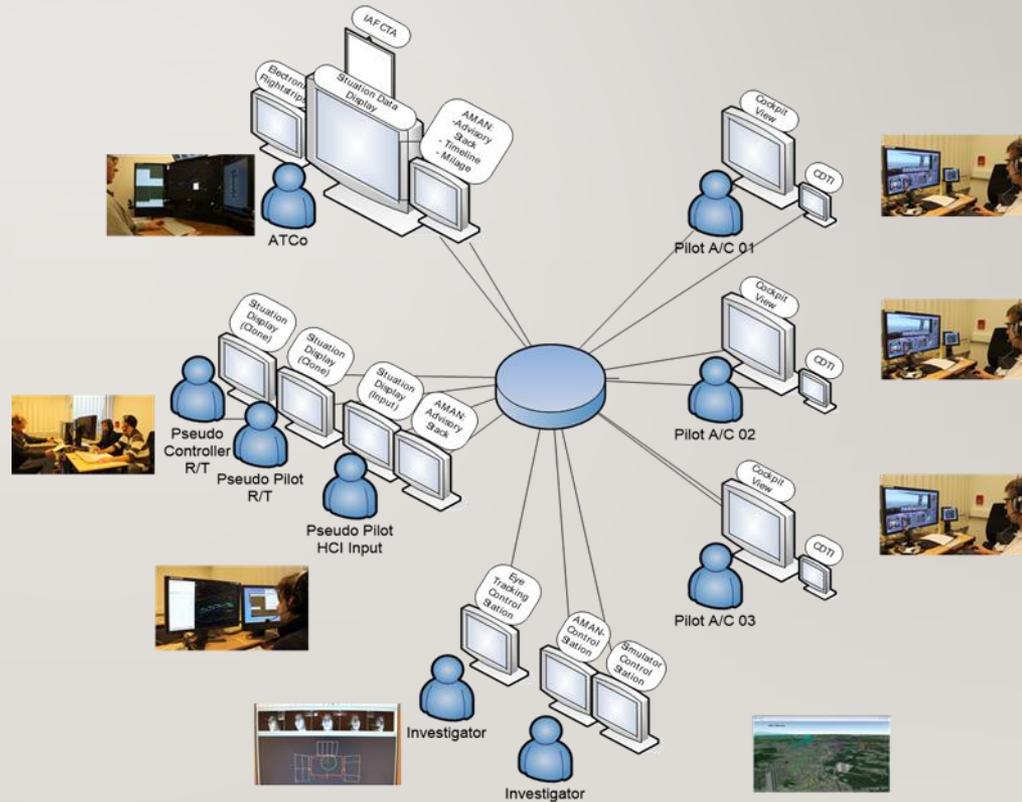
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BIGGEST CHANGES

- (DISTRIBUTED) TEAMS -





MOST DIFFICULT ISSUES

- Keeping the standards consistent
 - Even with economical pressure
 - Or lack of candidates
- Rejection of candidates and providing helpful feedback

STUPIDEST THING

- To base diagnostic decisions too much on subjective beliefs
- Fallible judgment
- Being convinced by deceptive truth
- Not to listen to colleagues for cross-checks



BEST THINGS

- Many students and colleagues
- Exposure to the operation
- EAAP accreditation
- Development of psychomotor tests
 - Based on job analysis
 - Combination of best known predictors: Instrument comprehension and motor control precision
 - Integrated multitasking of multi-channel information monitoring

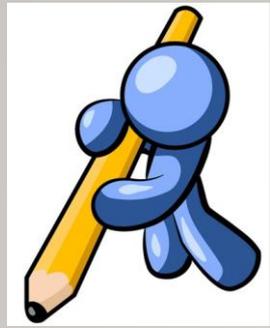


LESSONS LEARNT

- Better organize the decision process
- Prospective job analysis
- More theory-based test development
- Exchange of know-how and practices
- Collaboration between selection organisations
- Make use of computer-technology as a tool not as the goal

CONCLUSIONS

- Improve information management for diagnostic decisions
- Limit test inflation
- Stick to industry guidelines and standards for psychological testing
- Develop standards for NewGen assessments
- Promote professionalism in aviation psychology



Q & A



Selection in Aviation

A European Association for Aviation Psychology Report