

*Ten Years of National Projects  
at the IEA DPC  
A Review*

Report to the IEA General Assembly  
Berlin, October 2008



# *National Projects - Clients*

- Services provided for different contractors in Germany
  - Universities
  - Research institutes
  - Other organizations



# *National Projects-Type of Services I*

- Sampling
- Development and implementation of all field operation procedures
- School contacts
- All tasks related to data protection and privacy
- Recruitment, training, management and payment of test administrators
- Print preparation and printing
- Testing in schools



# *National Projects-Type of Services II*

- Receipt of material / logistics
- Scanning and distribution of material
- Recruitment, training, management and payment of test Coders
- Coding of data
- Data entry
- Data management / data processing
- Archiving of material

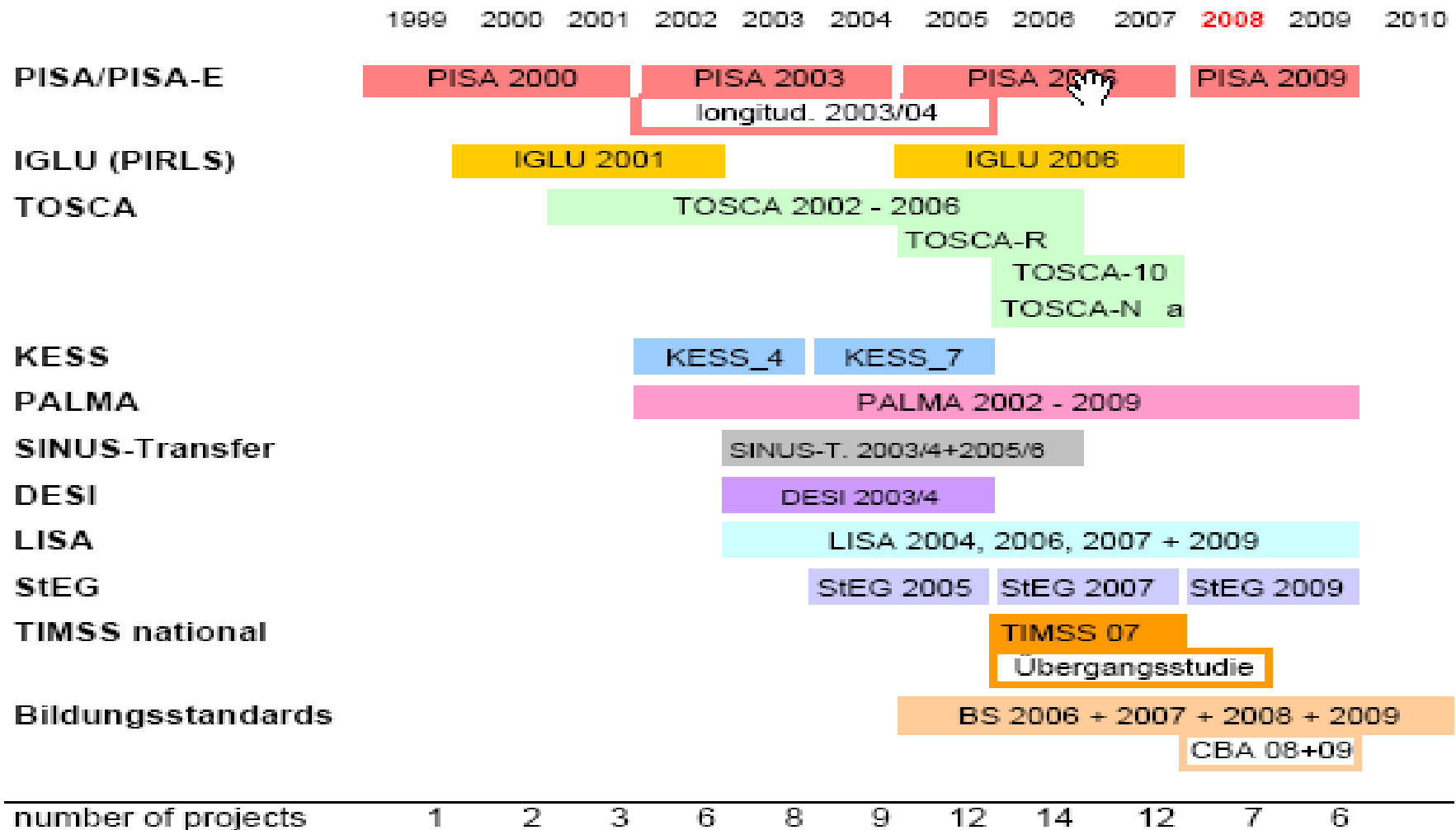


# *Units and Teams Involved*

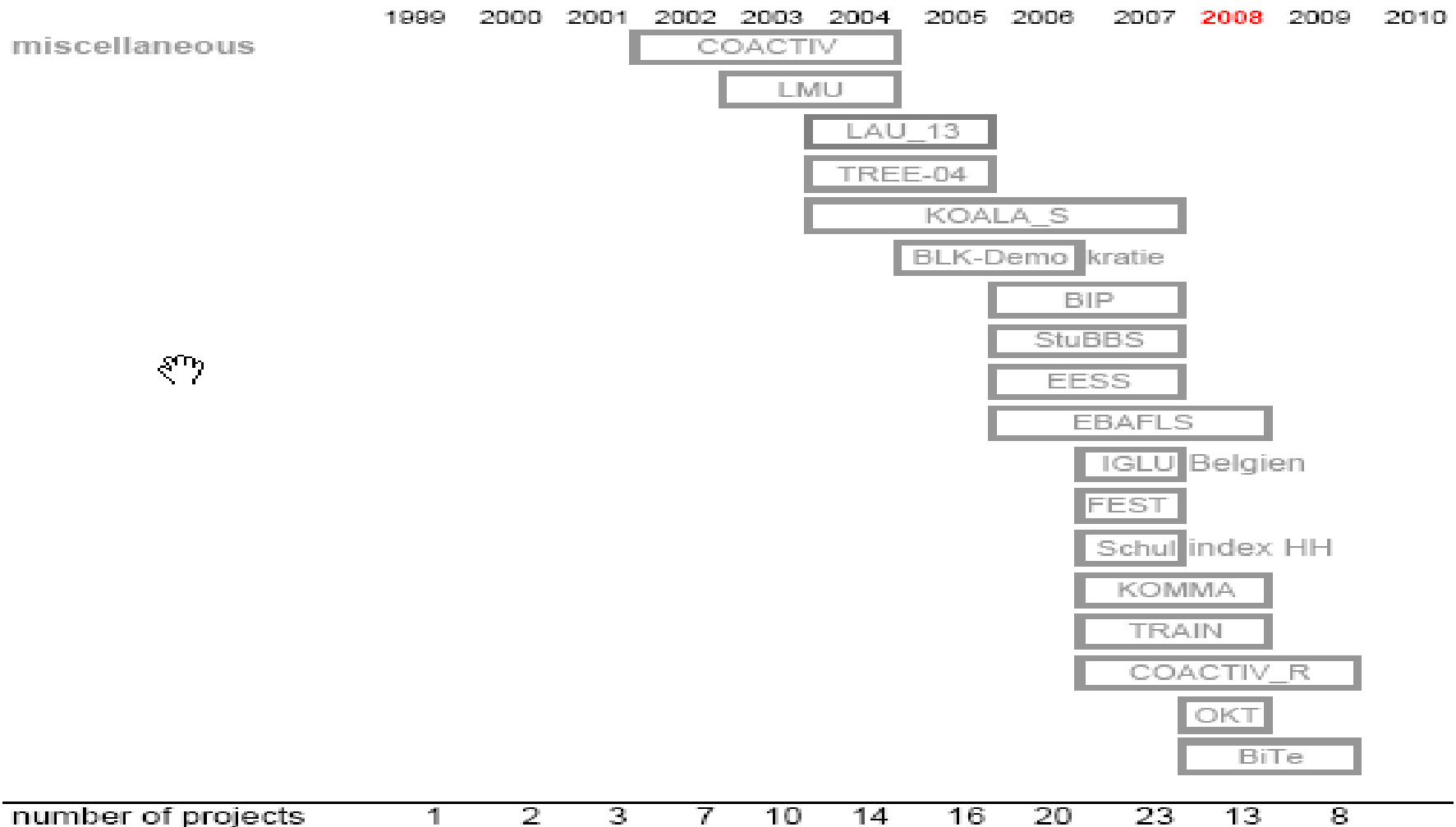
- Field operations unit
  - Test administration team
- Coding unit
- Data Management unit
  - Printing team
  - Logistics team
  - Scan team
  - Verify team
  - Data processing team



# Project Development



# Project Development



# *Project parameters*

- Size of projects
  - Schools: 30-1500
  - Students: 500-63000
  - Teachers 30-20000
- Instruments
  - Number of different instruments: 1-88
  - Number of pages per instruments: 2-150





# *Challenges-and how they were addressed*

- School management
- Management of test administrators
- Printing
- Coding
- Logistics
- Archiving



# *Challenge: Management of schools*

- Challenge: Increasing
  - Number of schools, teachers, students
  - Test groups
  - Complexity (Different treatments, several testing days...)
- Solution: Database reflecting the entire school coordination process
  - Within-school sampling
  - Documentation of school contact
  - Booklet allocation
  - Making use of different views on the data



# *Challenge: Management of test administrators*

- Challenge: Increasing
  - Specialization
  - Multiple assignments
- Solution: Database reflecting the TA assignment process
  - Test administrators' details
    - Adress
    - Competences, experience
  - Linkage to test groups in schools (-> school database)
  - Shipment of material
  - Invoicing form



# *Challenge: Printing*

- Challenges:
  - Less time between printing and test
  - Simultaneous print jobs
  - Delivery control
- Solution
  - Adopt printing on demand technology
  - Create print database that's connected to the school database and test administrator database
  - Establish interface with printer and connect to test administrator database
  - For small studies and critical projects: establish in-house printing facilities



# *Challenge: Coding*

- Challenges:

- Multiple number of test booklet
- Same item in many positions/booklets
- Limited amount of time
- Precision requirements

- Solution

- Coding software
- Mirrors the coding process
- Uncouples paper and pencil position and coding procedure
- Training with immediate feed back
- Control within an between coder
- Preparation of invoices



# *Challenge: Logistics*

- Challenge: Increasing
  - Number of schools, teachers, students
  - Test groups
  - Complexity (Different treatments, several testing days...)
  - Immediate action if low participation rates or missing material
- Solution: Database reflecting the entire school testing and printing process
  - Printed and shipped booklet
  - Tracking of all incoming material
  - Completed? Empty?



# *Challenge: Archiving*

- Challenge: Immediate retrieval of instruments
- Solution: Archiving program
  - All scanned pictures stored in hierarchical file structure, reflecting: state, school type, school, class, student, instrument, page
  - File system reflected in data base
  - Search, sorting, building of sub-groups through queries
  - Collection of pictures through query



# *Future challenges*

- Computer based assessment
- Shared work/versioning
- Logistics process
  - Time consuming
  - Too many manual operations
- Quality requirements
  - Response rates
  - Comparisons with official statistics
- Costs (Investment, maintenance, training, staff development)
- Benefits
- Risks





*Thank you*



INTERNATIONAL ASSOCIATION FOR THE EVALUATION OF EDUCATIONAL ACHIEVEMENT

**DPC**

IEA DATA PROCESSING  
AND RESEARCH CENTER

HAMBURG  
GERMANY