Face Video Competition

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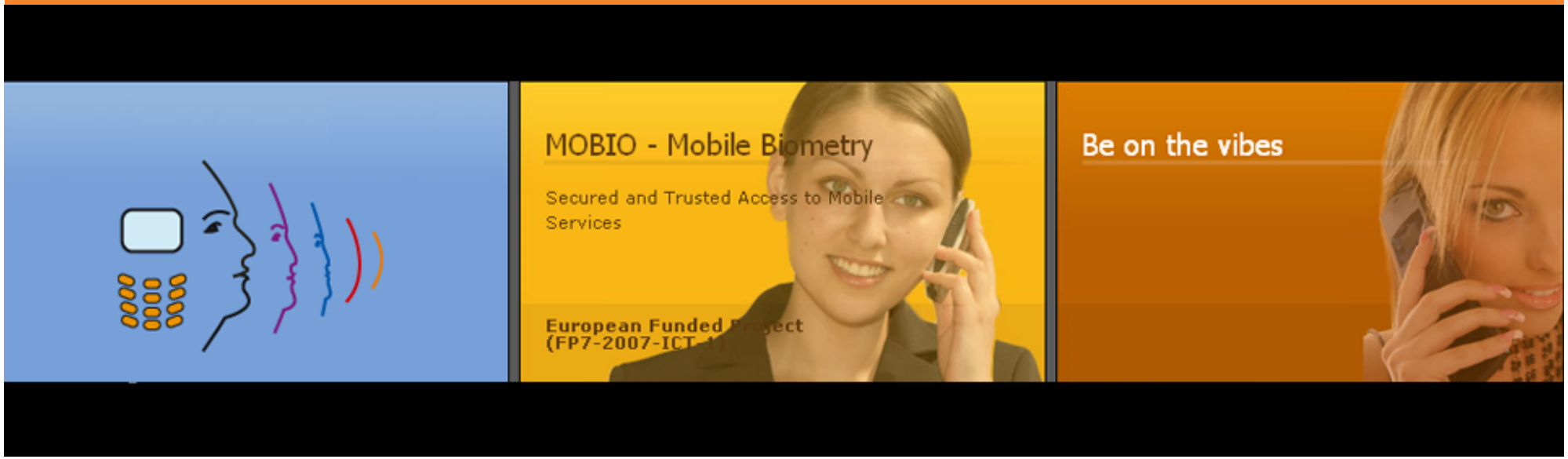
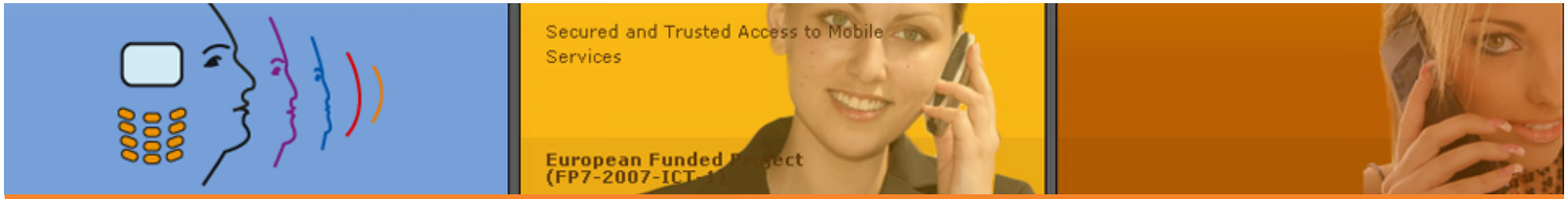
Presented by John Howard

MOBIO Review Meeting, Sep.16-17, 2009

EyePmedia – 1020 Renens

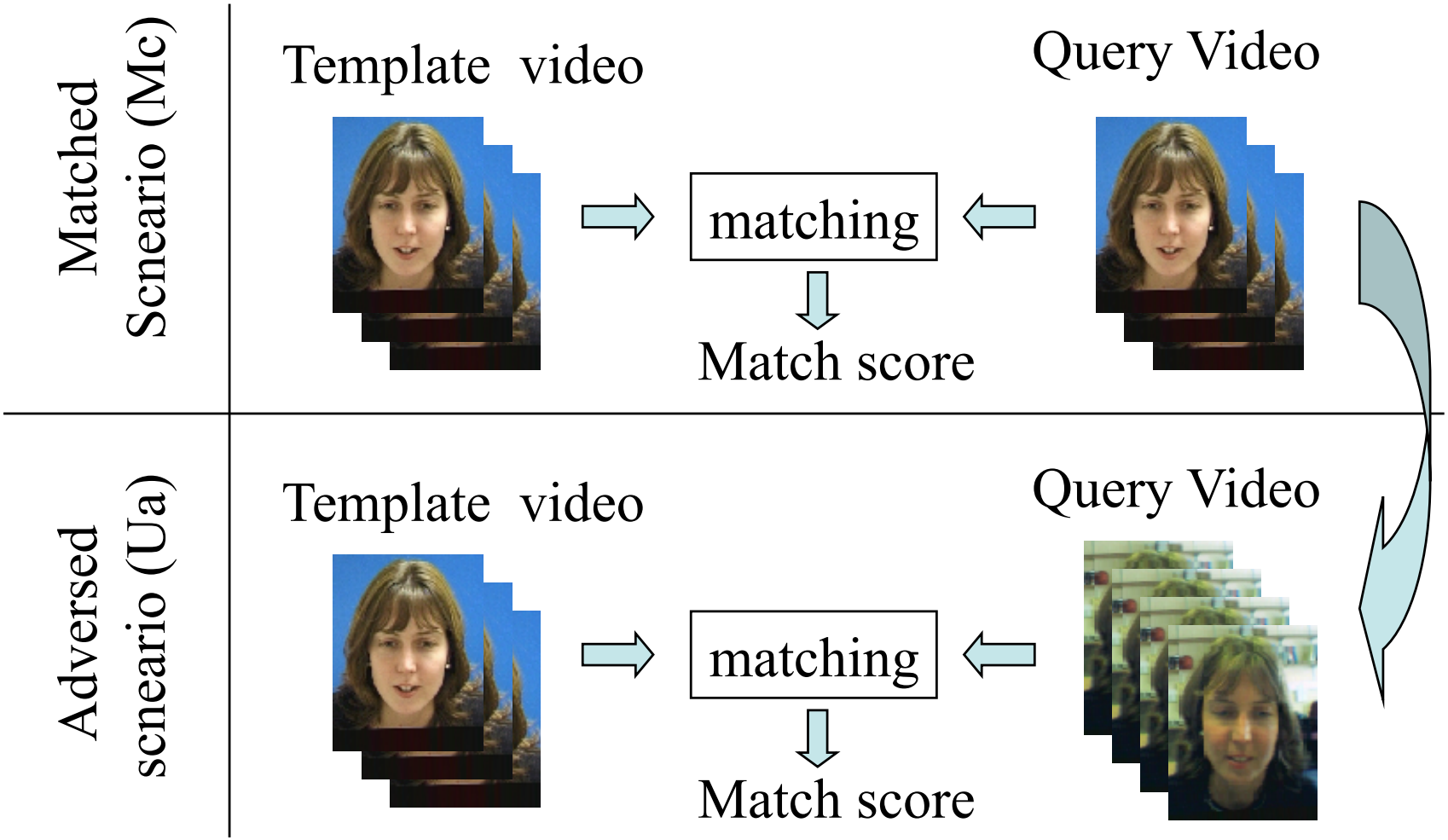


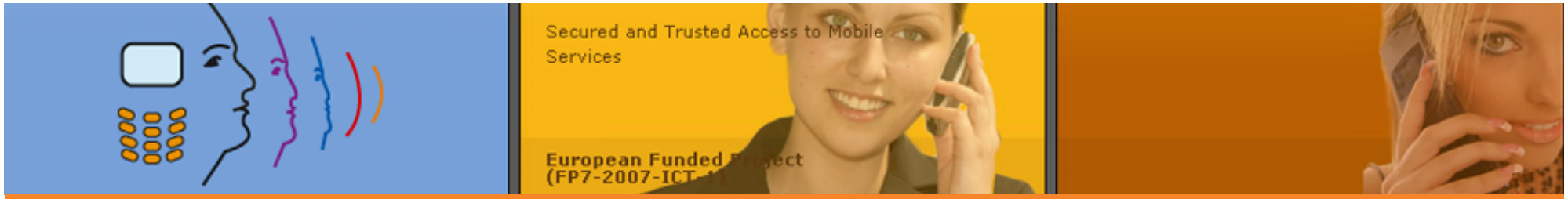


Objectives of Evaluation

- to promote the development of algorithms for analyzing video sequences (e.g., exploring the talking face dynamics)
- to assess the merit of multi-template face representation
- to assess the usefulness of quality measures in video-based recognition

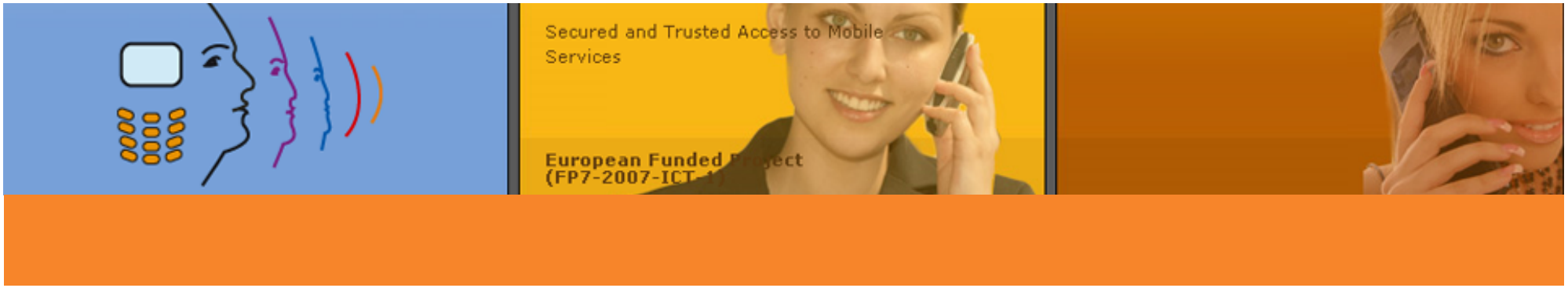
Video-to-video matching





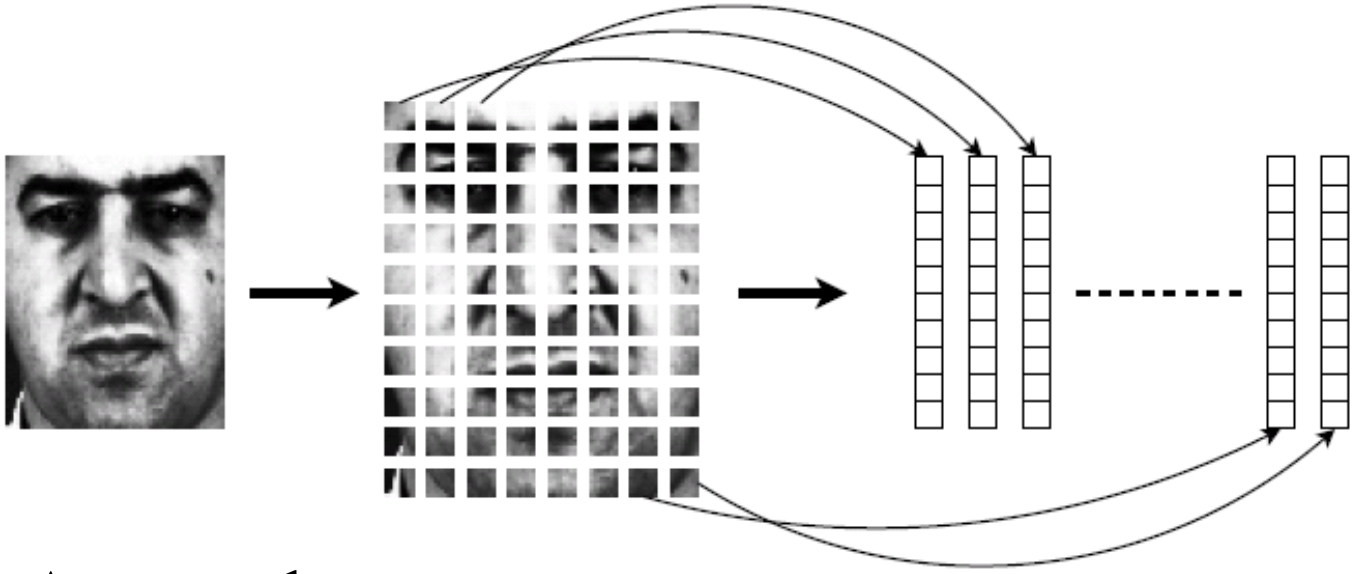
Some Statistics

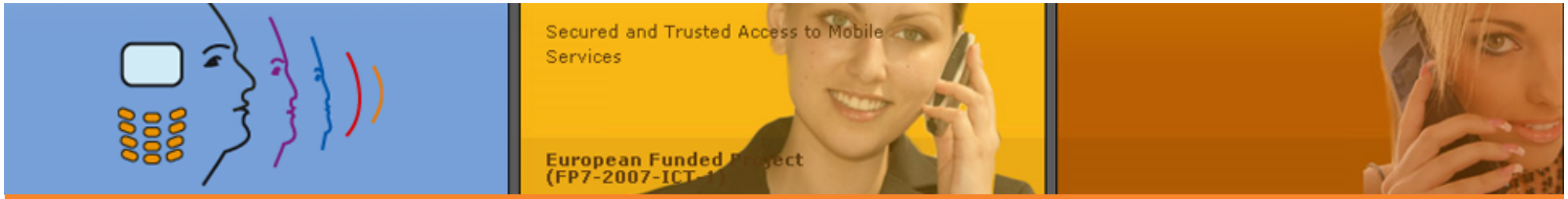
- 7 research institutes
- 18 algorithms
- 1 conference paper + 1 draft journal



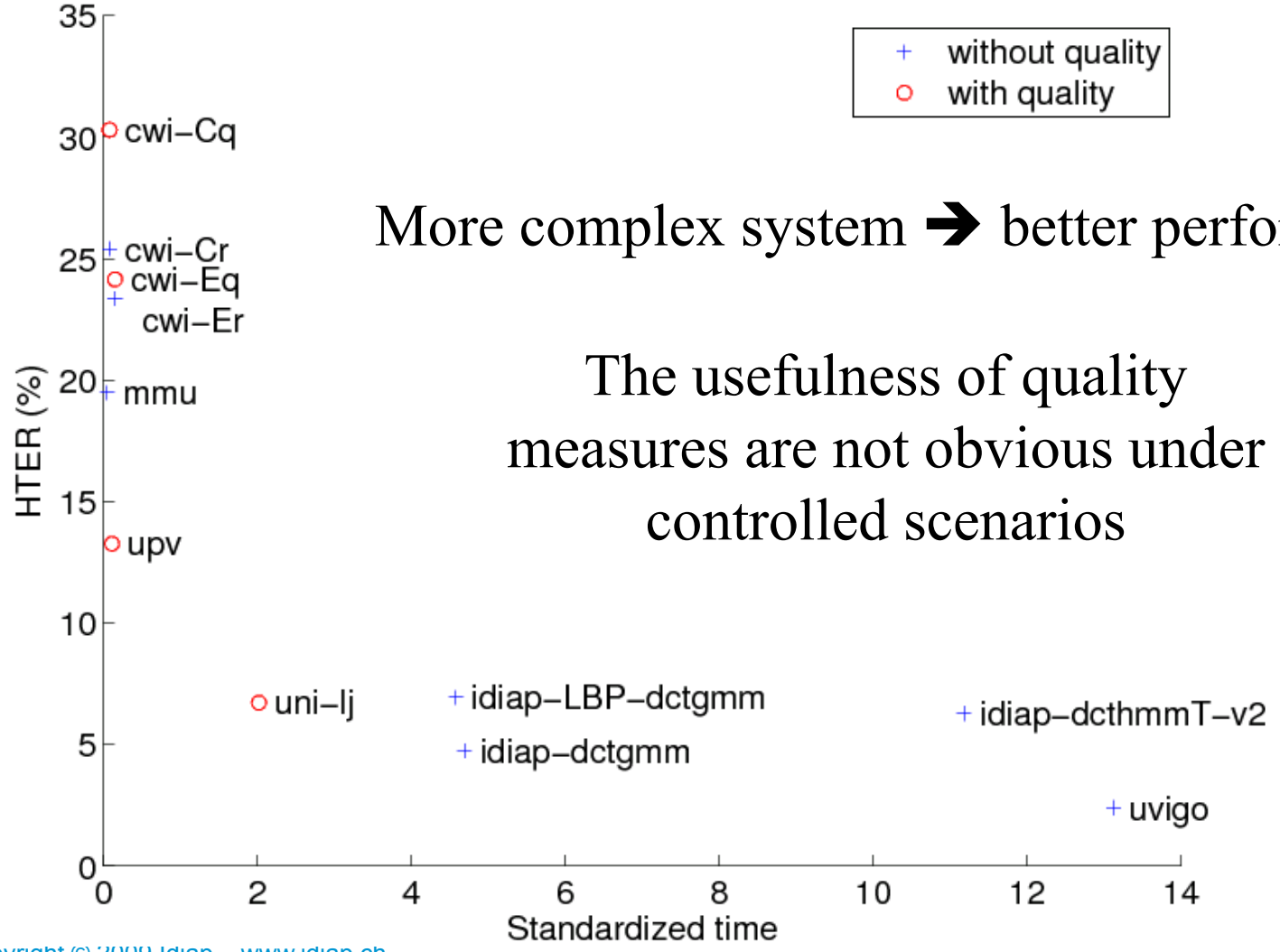
	Parts-based approach	Holistic approach
Frame-based approach matching	11 systems	6 systems
Video-to-video (image-set) matching	None	1 systems (mmu)

Parts-based Approach



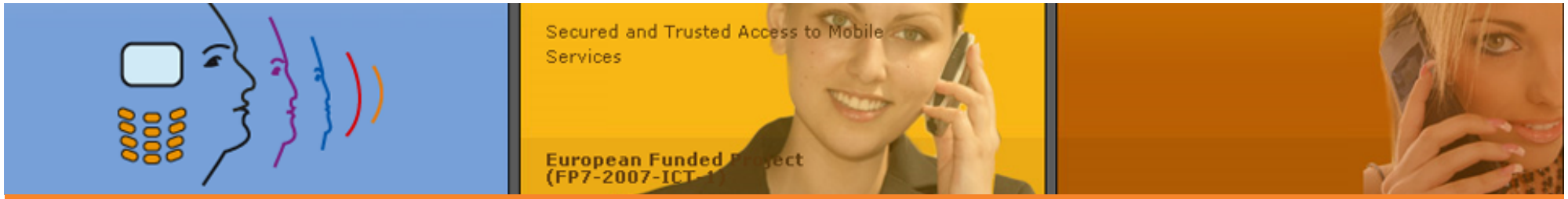


Cost-performance analysis: Mc (controlled)

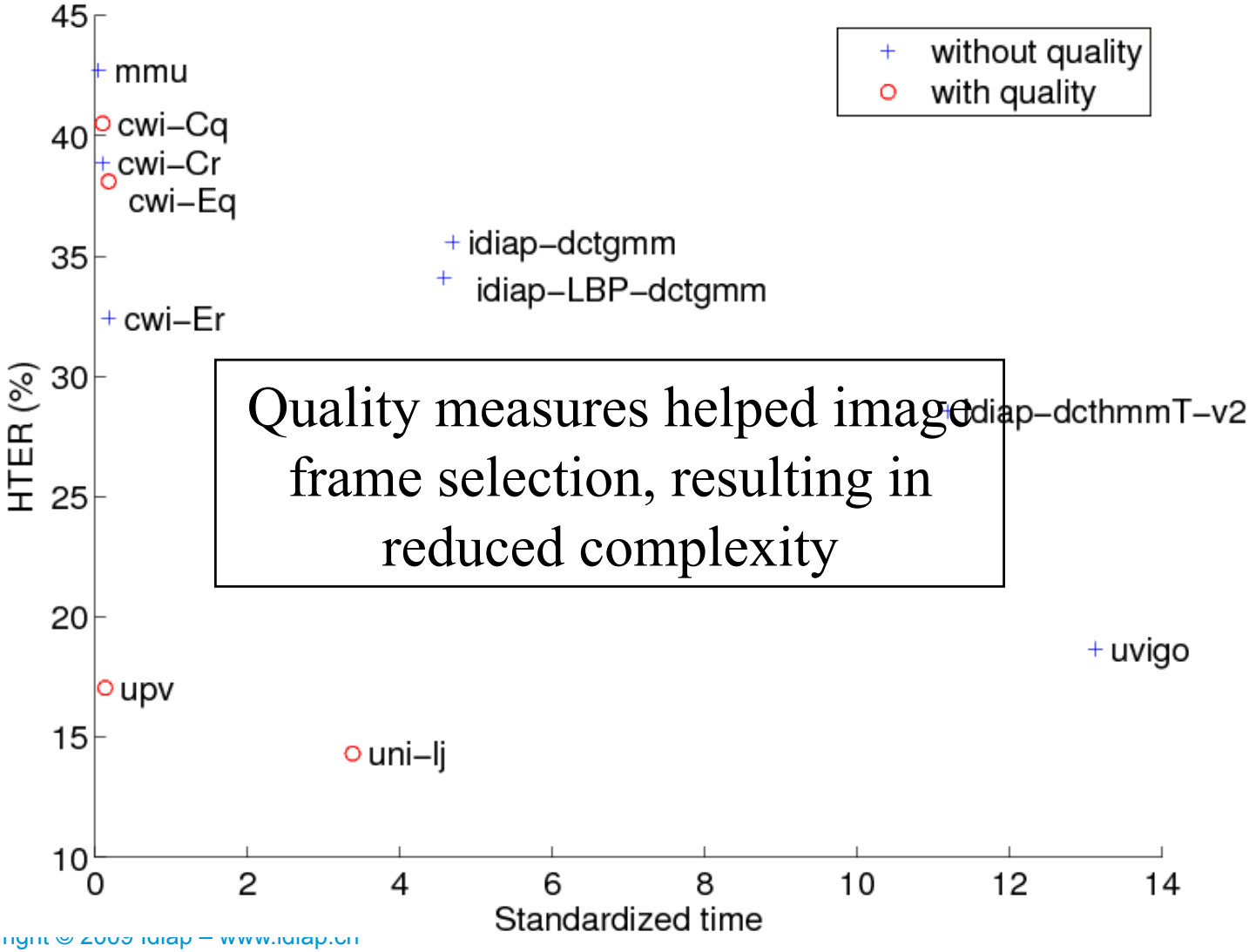


More complex system ➔ better performance

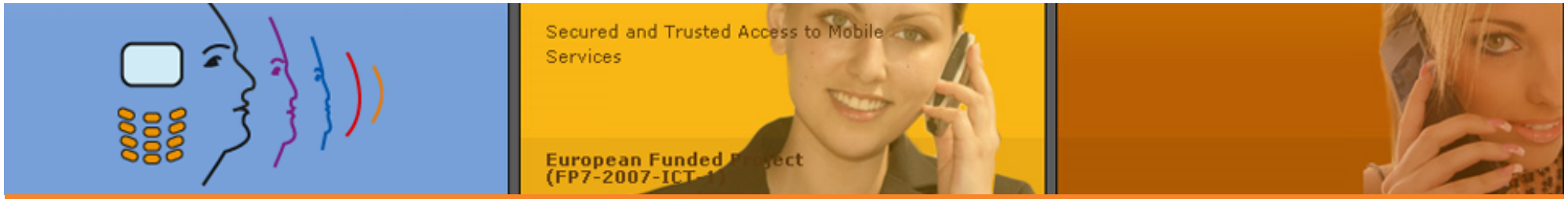
The usefulness of quality measures are not obvious under controlled scenarios



Cost-performance analysis: Ua (adversed)

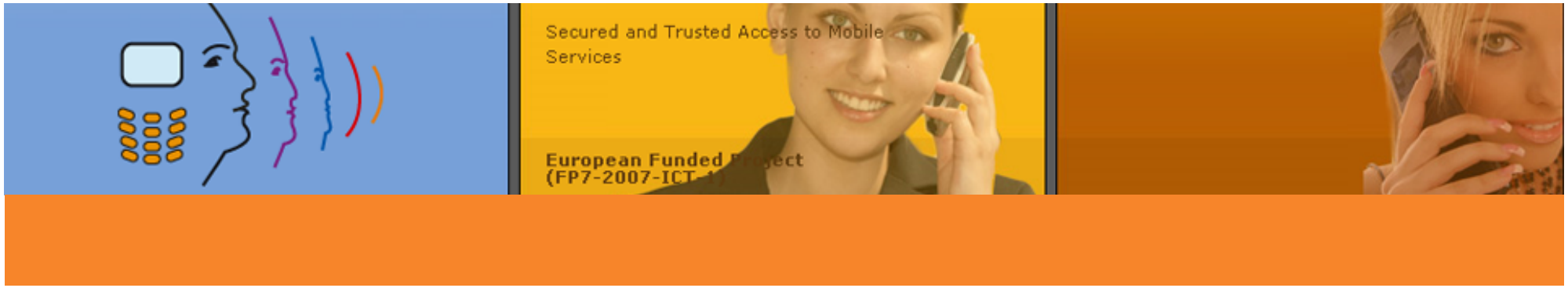


Quality measures helped image frame selection, resulting in reduced complexity



Summary

- First known video-based face evaluation
- Parts-based approach offers better robustness to face localisation than the holistic approach, leading to better performance in practice
- More complex systems generally perform better
  - System complexity was established using a standardized time



Thank you for your attention