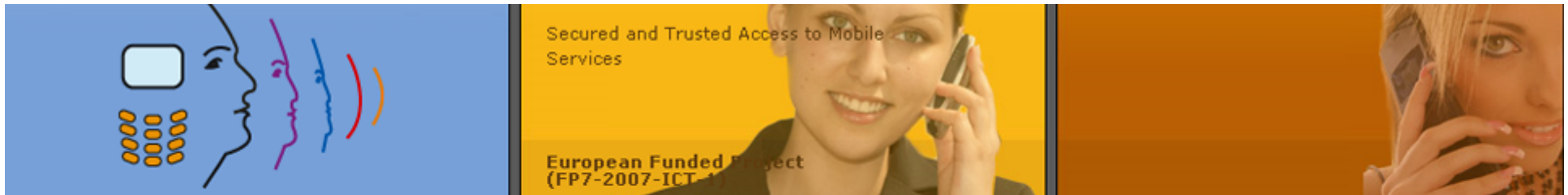


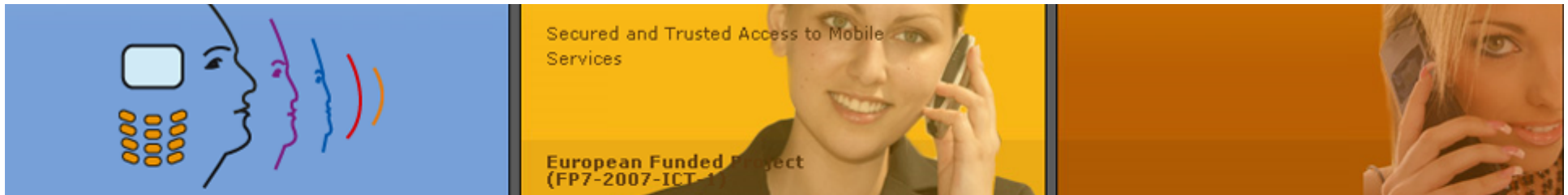
D5.1 : Scalable uni-modal systems



D5.1 : Scalable uni-modal systems

Planning

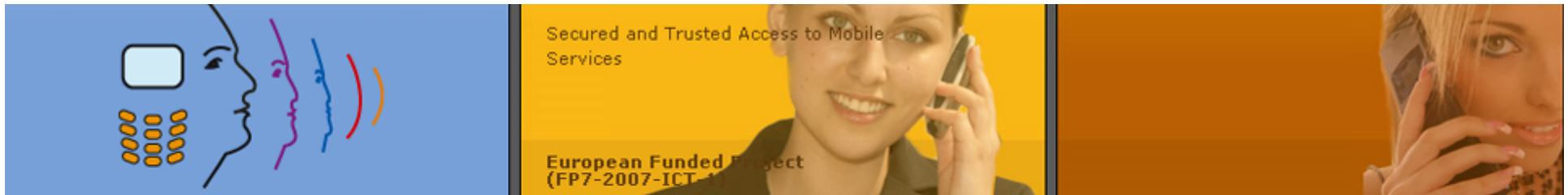
- D5.1 ready for the end of november
- 15/11/2009: Each partner upload on the SVN
 - Scalable systems
 - Report on the uni-modal scalable systems (on advance)



D5.1 : Scalable uni-modal systems

Audio Scalability: LIA

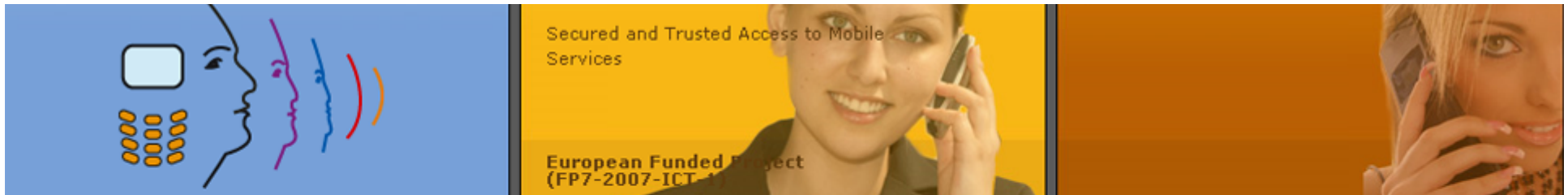
- VAD & Feature Normalization
 - GMM-based & short-term constraint
- Feature extraction
 - Limitation of size
- GMM statistics computation and scoring
 - Study of size models
 - Investigation into selection of Gaussians for GMM evaluation



D5.1 : Scalable uni-modal systems

Audio Scalability: BUT

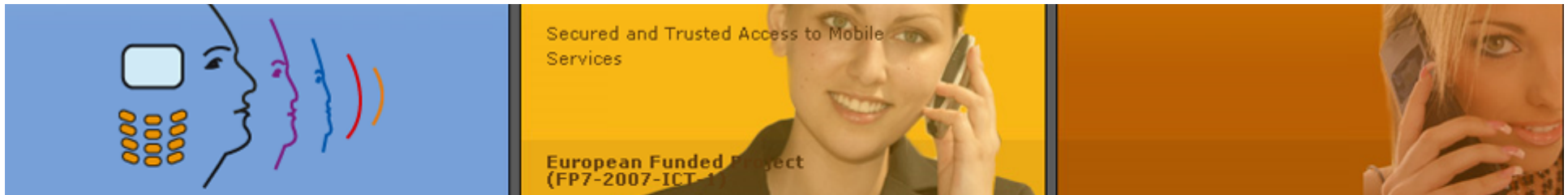
- VAD & Feature Normalization
 - ANN system & short-term constraint
- Feature extraction
 - Limitation of size
 - Frame Skipping
 - Gaussianisation
- GMM statistics computation and scoring
 - Study of size models
 - Investigation into selection of Gaussians for GMM evaluation
 - Shared covariance matrix (BUT)
 - Fast scoring (.product)



D5.1 : Scalable uni-modal systems

Face Scalability:

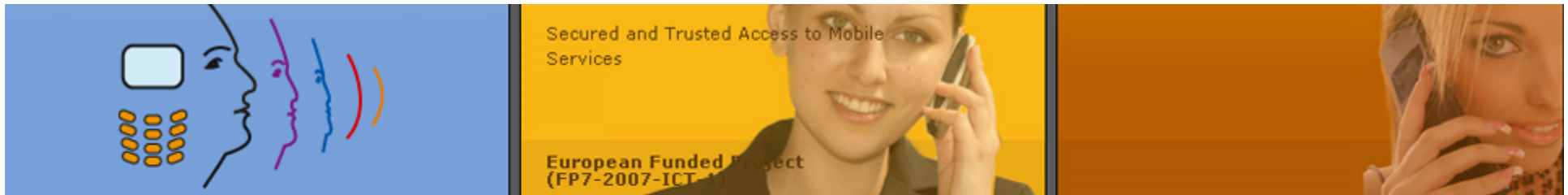
- Each module studied in isolation
- Evaluation:
 - Face Detection: BANCA
 - Face Localisation: XM2VTS
 - Face Verification: BANCA (P protocol)
- Overall performance of the three systems in a chain is provided
- Optimisation of the three systems together



D5.1 : Scalable uni-modal systems

Face Detection(localisation): UOULU & Idiap

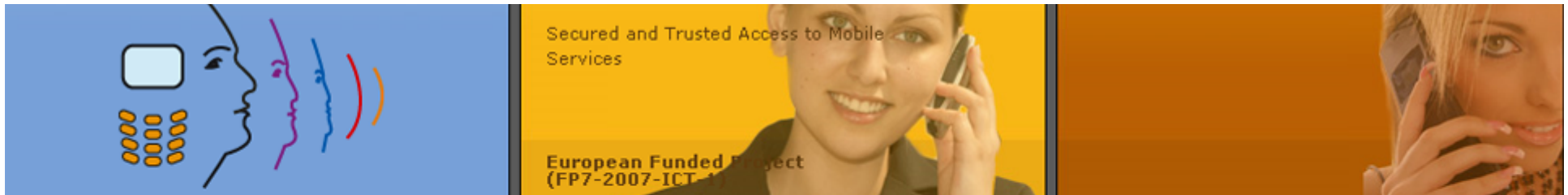
- To change the scanning parameters
 - Range of space sizes (the scales)
 - To limite the scanning windows (step sizes)
 - Frame scalability
- Simpler model: removing N cascades
- Fixed point arithmetic
- Features reduction
- Stop after detecting one face



D5.1 : Scalable uni-modal systems

Face Localization: UMAN

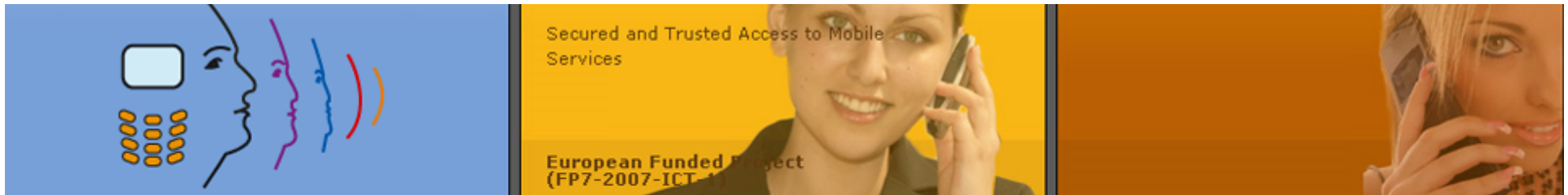
- Reducing the number of points (for face modelling)
 >> imprecision for the eye centers
- Size of the template (feature patch)
- Radius of the search (if possible)
- Number of iterations before stopping (compared to method of convergence)



D5.1 : Scalable uni-modal systems

Face Verification: UNIS

- Reducing the number of dimension for PCA + LDA
- Replace PCA + LDA with feature selection (boosting ?)
 >> Varying the number of features
- Replacing the chi-squared similarity measures with efficient (potentially fixed point measures) like intersection algorithms



D5.1 : Scalable uni-modal systems

Report content (on advance)

- Description of the systems
- Evaluation for each scalable parameter
 - Performance in terms of CPU / memory
 - Performance should be given both absolute and relative to the baseline system.
- Evaluation of the « best » system (considering all scalable parameters together)