European Media Laboratory GmbH
From Applied Research to the Market

Experience IT! Intuitive Technology

Dr. Siegfried Kunzmann
European Media Laboratory (founded 1997)

- Offerings: Research-based Products, Solutions and Services
  Mobile, Location-based Pedestrian Portal Technologies
  Situation-Aware Mobile Applications
  Service-oriented, adaptive applications

Speech Interaction: Multi-model, Speech User Interfaces
Speech Communication: Telephone & Media Transcription
Telephone & Media Speech-to-Text Applications

• **Speech Messaging**
  - Voicemail-to-SMS
    - Insight to Messages, Convenience
  - Voice Search (location-based services, FAQ)
    - City information access

• **Speech Analytics for Contact Center & Helpdesks**
  - Customer Inquiries
    - Call routing, Customer Satisfaction, Customer Insight
  - Automated Quality / Activity Monitoring
    - Agent Performance, Business Intelligence

• **Media Transcription**
  - Search Media, Pre-final Transcript, Subtitling
• **Objective:** Automatically Convert Voice Messages to Text
  - Send text or categorized content (e.g. appointment & time) as SMS or Mail
• **Benefit:** Receiver gets insight on relevance of received messages
• **Scenario:** Voicemail transcription
Voice Search – Location-based Services

- **Objective:** Fast and convenient search interface on mobile devices
- **Benefit:** Search places, restaurants, events, … by speech

- **Scenario: Search Locations by Voice**

  “Where’s the next pizzeria?”
Customer Inquiries – Before/during/after Call

**Objective:** Interview customer before/during/after call + statistical analysis

**Benefit:** Measure and improve customer satisfaction

**Scenario:** Speech-to-Text Web-Interface
Automated Quality & Activity Analysis

Contact Center

- Recording & quality monitoring platform: record & store customer calls
- Speech-to-Text: transform human conversations into text
- Automatic call analysis
  - Text & times used as indexes for retrieval & analysis
  - Call Categorization: assign call category & route appropriately
    - order, availability, cancelation, complaint, …
  - Call Filter: spot few “bad calls” and improve evaluation process
    - “agent followed start/end procedure?”
    - “agent solved caller problem?”, …
  - Automatic Form Filling: Evaluation Sheet
Media Transcription

- **Objective:** Convert Audio Streams to Text & Time Tags

- **Benefit:**
  - Search Media Content & Video / Audio on Demand
  - Pre-final Transcript from Interviews
  - Video Subtitling / Close Captioning

- **Scenario:**
  - German: Broadcast News ("Heute in 100 Sekunden")
  - Italian: RAI News, Camera dei Deputati
Summary

• Focus of the European Media Laboratory
  - Develop & market usable software for humans
  - Provide robust speech-to-text systems for multiple languages
  - Partner to expand language portfolio

• Speech Communication Applications are reality
  - Scenarios: Speech Messaging, Speech Analytics, Media Transcription
  - High quality requires technology tuning - that is...
    - DATA, DATA, DATA

Thank You 😊