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**ITU Regional Workshop on ICT Accessibility for Persons
with Disabilities for the Africa Region**

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**ICT Accessibility for Equal Education & Employment Opportunities for Persons with
Disabilities**

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G3ict



**International
Telecommunication
Union**

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Agenda

- Specific challenges and opportunities for accessible and assistive ICT solutions
- Italian disability laws and regulations for Academia
- MultiChancePoliTeam: existing ICT assistive services and applications
- Advanced applied research on wireless assistive ICTs on campus

Academia for adult life, employment and social responsibility

- **Adult life and the ... “professional self”**
 - The importance of becoming an expert to exercise specific responsibilities in different social contexts.
 - Different professional profiles: scientific *versus* humanistic ones
- **The Campus is a small but complex and significant social context**
 - Where people study, teach, work, cooperate, communicate, research
 - Many persons cooperate with different abilities and disabilities.
 - Everybody can experience autonomous and cooperative dimensions possibly supported by innovative strategies

Academia for adult life, employment and social responsibility

- **Academia is a “special land” which allows protected but strategic relationships between:**
 - Learning and professional environments (i.e. schools / enterprises)
 - Social and cultural dimensions
 - Private and public contexts, governmental and non-governmental partners
- **The applied research can promote**
 - ICT accessibility and innovation
 - The analysis of the real impact of ICT and AT and better evaluation of their efficiency
 - The harmony between human and technological strategies
 - A ‘daily’ confidence with ICT and Assistive Technology

At Politecnico di Milano – In Italy

- At Politecnico di Milano: **MultiChancePoliTeam** is the group of specialists which guarantees services to students with disabilities (www.polimi.it/disabilita)

- In Italy:
 - A **special Law** (number 17/99) guarantees financial supports to organize special services to make the academic life more and more accessible.
 - **Each university receives funds** in relationships to the number of students with disability, the special projects which support them in studying and facing the first employment experiences.
 - **CNUDD groups the Dean's Delegate for Disability** of each university allowing them coordination, global policies and exchange of innovative strategies.

Special Services: The MultiChancePoliTeam

- The **MultiChancePoliTeam** guarantees services to the students with disability:
 - A psycho-educational counseling
 - University attendance support (admission test, tutoring, personalized examinations, accessibility to the campus, administrative, accommodation and studying supports)
 - Teaching aids: conditions specifically suited to maximize the benefit of classroom and laboratory work by means of personalized and innovative technological teaching aids (Text To Speech & Automatic Speech Recognition technologies)

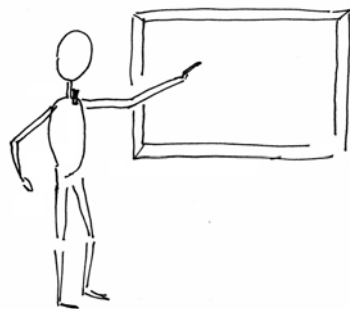
Special Services: The MultiChancePoliTeam

- The **MultiChancePoliTeam** guarantees services to the students with disability:
 - Technological aids (HW and SW solutions for personal needs)
 - The Wireless Campus allows a personalized fruition of classrooms and laboratory activities, Internet and local services,
 - Distance Learning (only when strictly needed)
 - International mobility

Special Services

Multimodal fruition of lectures

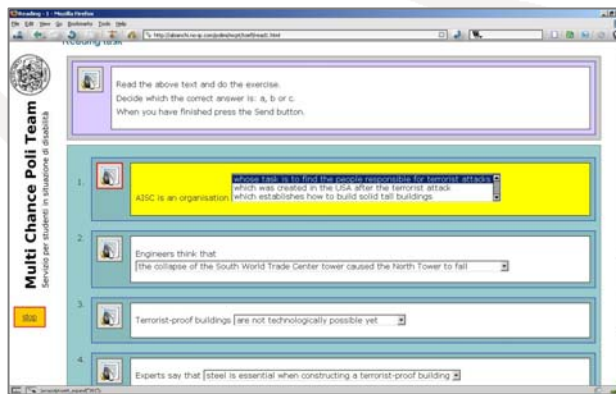
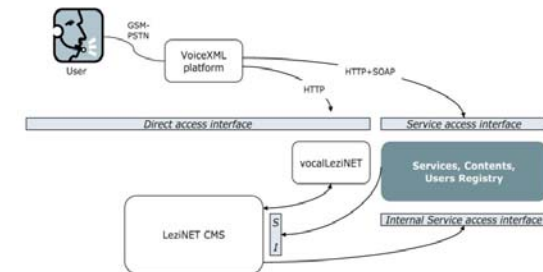
- Recording and converting lectures
- Allowing multimodal cooperation
- Creating guide-lines for teachers (to improve multimodal materials and lectures)
- Handling distance learning



Special Services

Natural Language Processing for Dyslexia

- To study a foreign language
- To prepare and use accessible versions of admission tests
- To face language complexity



$$I_G = 89 - 10 \cdot \frac{N_L}{N_P} + 300 \cdot \frac{N_F}{N_P}$$

$$I_{READ} = a \cdot I_G + b \cdot I_C + c \cdot I_T$$

“ICT and Disability”: a new Observatory



- A new Observatory on “ICT and Disability” has been created on 2007
 - The team of experts: computer scientists (ICT Institute) experts on management and a non-governmental partner
 - To monitor the employment (but not only) of people with disabilities
 - To share information on (and promote) innovative ICT
 - To maintain an academic, public and private sectors network

Advanced Applied Research UBICAMPUS and wireless technology

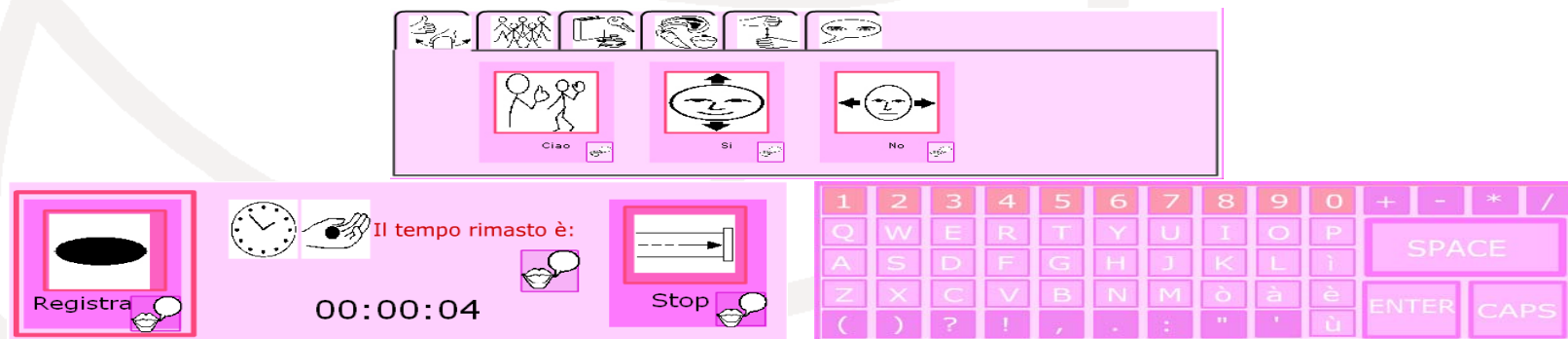
- To navigate and explore the wireless campus
- To reach a complete accessibility of global and local information (often daily changing)
- To communicate with the other protagonists of the academic life
- To handle emergencies



Advanced Applied Research ATONOMA-MENTE

Independent Living

- Multimodal Communication
- Domotics and Automation
- Personal Assistance
- Emergency Handling



Results

- Students with disabilities with technical degrees from Politecnico di Milano: **0% unemployment rate** over 7 years
- **First year** of employment **supported by the University** with government funds
- All students, once they have experienced **good assistive technologies keep using it** for their private and professional lives
- Programs help **employers better adapt the work environment** to persons with disabilities



G3ict & ITU

“Digital Accessibility Index for Persons with Disability”

“Toolkit for Policy Makers”

