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Digital storytelling for social inclusion of severely disabled

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Digital storytelling:

for

Social Inclusion of Severely Disabled:

- the first aim is to share invented or real-life-based content using a narrative format for entertainment or “higher” purpose
 - uses multimedia technologies in order to reach this target
 - traditionally designed for people with ICT-literacy
- starts from the idea that:
 - social participation should be a **RIGHT** of everyone
 - **EVERYBODY** has something positive to be shared with others
 - widely uses Augmentative and Alternative Communication (AAC) methodology

Our Effort:

- to apply Digital Storytelling technologies to improve Augmentative & Alternative Communication system already used by a eighteen boy with multiple disabilities
- to document the effects of new and “appealing” instruments on communication and social inclusion

How did we reach/use Storytelling and Virtual Reality?



We used a software named Inscape.

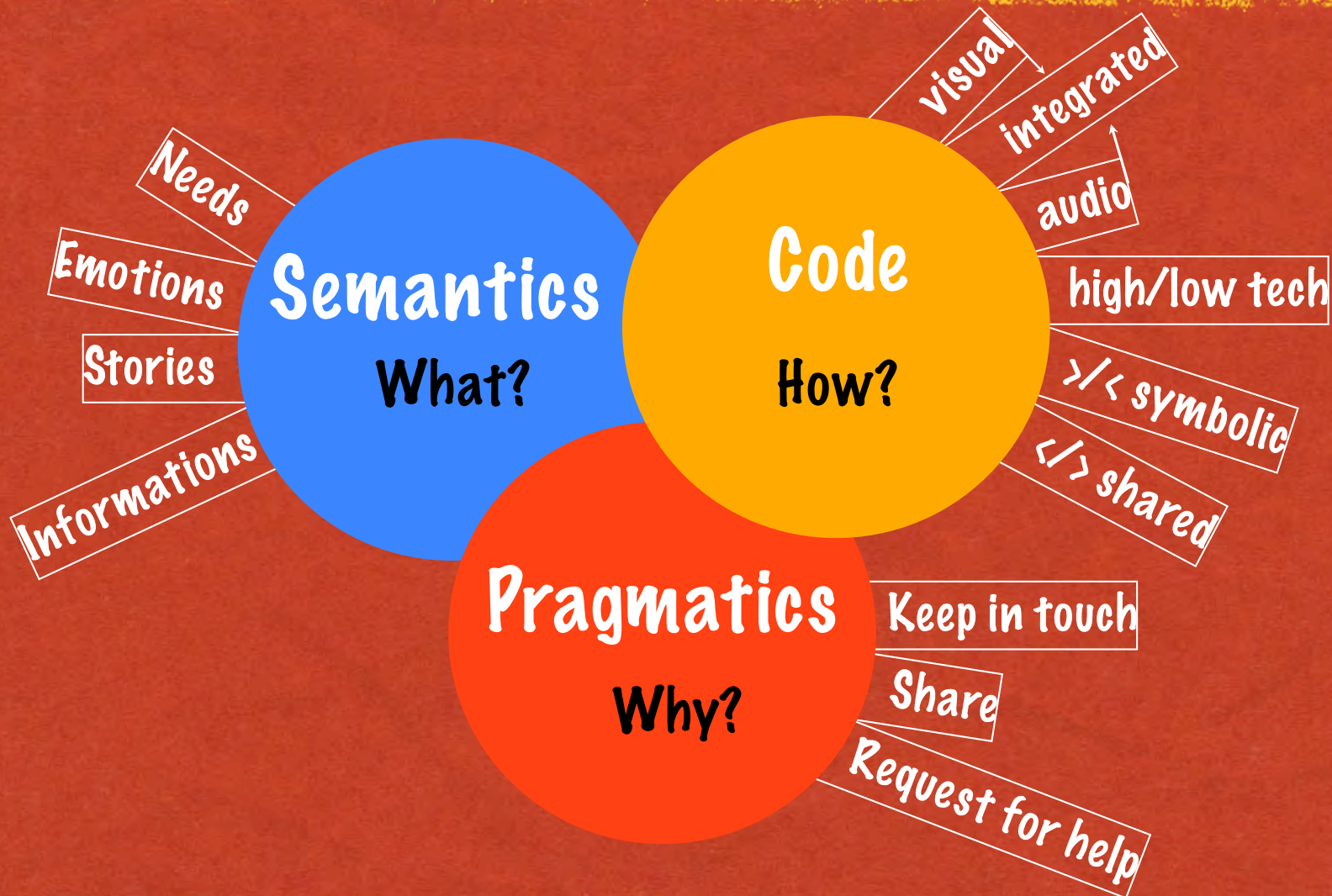
INSCAPE (IST-2004-004150) is an Integrated Project of the European Union's 6th Framework Programme Thematic Priority 2 (Information Society Technologies). It was submitted under the strategic objective "2.3.2.7 Cross-media content for leisure and entertainment".

We adapted the authoring software use from entertainment to rehabilitation field.

One step back: what is Augmentative & Alternative Communication?

- AAC designs ANY ATTEMPT to compensate a difficulty or impossibility for a person to communicate verbally.
- The aim is always to TRANSMIT A MESSAGE and, finally, to enable a person to effectively ENGAGE IN SOCIAL RELATION, so to PROMOTE SOCIAL INCLUSION

AAC interests simultaneously:



AAC shapes its interventions on:

- age & developmental issues
- cognitive level & communicative intentions
- physical abilities (consider all the body!)
- pragmatic, economic & sociocultural context
- low-tech or high-tech instruments



Luca's History

Video

From isolation to social inclusion using AAC



*Intimate code
Low-tech*



*Common code
Low tech*



*Common code
High-tech*



*Storytelling
High tech*

**Each step has been added to fix
previous unresolved problems**

The dilemma: to be alive or live?



Using AAC through these years:

Recognized benefit

- Reduced frequency of behavior problems
- Shared development and use of instruments and practices (family, school, therapists, friends, ...)
- Increased Luca's self-efficacy in basic-needs communication skills
- Increased Luca's participation in AAC-aided activities
- Flexible AAC usage in didactics and rehabilitative field

Unresolved problems

- Laborious and time-expensive instruments update/synchr./integration
- Lack of Luca's autonomy in changing topics and handling AAC instruments
- Difficult management of unpredictable situations (events/activities/thoughts not included in AAC sheets)
- Linguistic vs. episodic semantics?
- "Lack of appeal" of low-tech instruments for peer-relations

...Unresolved problems

How do people with severe learning disabilities organize their knowledge ?

- ~~Hp1: organize their knowledge (semantics) on linguistic categories (e.g. all fruits, all colors, all places)~~

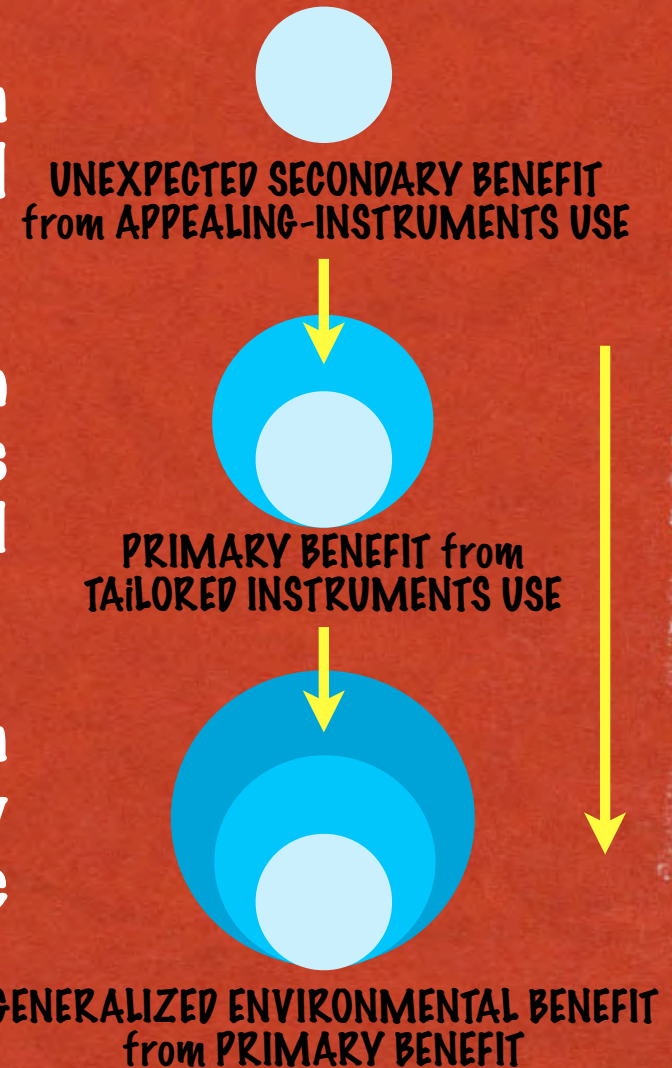


- Hp2: organize their knowledge on **SCRIPTS** of specific episodes (semantics are context/experience based)



Results of Storytelling & VR application in AAC field:

- the new technologies used aroused interest in Luca's classmates and enhanced social contacts
- during these new social interactions with Luca, his classmates discovered some of his hidden abilities, and took part at his world (routines, experiences, places)
- Digital Storytelling techniques has been chosen as a didactic instrument for new curricular activities (autobiographic storytelling) by the whole school



Storytelling and Virtual Reality (VR) can help us to promote social inclusion

How?

- building applications that can help severely disabled to **ENJOY** and **SHARE** their past and recent **EXPERIENCES**, memories and emotions in a simple and vivid way (tell a story)
- providing severely disabled with instruments that can help them **MAKING CHOICES**, plan future actions and communicate them to people
- creating **TAILORED DIDACTICS** and **RE-HABILITATIVE ENVIRONMENT** that can be easily handled by family, teachers and therapists
- Providing SD of a **SMART DEVICE** that can attract peers and allow them to discover hidden abilities

What else does Luca need?

- To talk about his dream and wishes
- To plan future activities
- To always receive the opportunity of being included in a social environment: to stay more and more with others guys (which future solutions after school ending?)
- (...to be an active part of the "crew" all the time...)

.....these are our next challenges

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