



# VOICE Project and Year 2003



## ***Development and harmonisation of subtitling in European television broadcasting***

***Conference eAccessibility by Voice:  
VOICE Recognition supporting people  
with hearing or other disabilities***

*Presentation by Giuliano Pirrelli  
European Commission Joint Research Centre  
Institute for the Protection and  
the Security of the Citizen*

***Canada-Europe eInclusion  
Symposium***

*Montreal-Ispra, 15 March 2007*

## ***Development and harmonisation of subtitling in European television broadcasting***

***1/3 population: languages/communication difficulties***

- ◆ living or travelling in other countries  
(news, education, amusement)
- ◆ hearing impaired and elderly

focusing the aims and define the balance between technical and social aspects

- ◆ subtitles quantity: from 30%(?) to 100% of broadcasts
- ◆ quality: validation by (weak) user groups
- ◆ audience: lack of indicators on teletext pages' users
- ◆ style: differences in different countries
- ◆ DVD: uncertainty in a new area
- ◆ lack of awareness and co-ordination



# TV Subtitling Harmonisation



## DG-JRC & DG-Enterprise

Meetings with the television broadcasters and CENELEC, aimed at providing technical support that may help in armonising subtitling in European television broadcasting



CENELEC final report *TV for All*:  
Barcelona meeting 28 October 2003

A Joint  
CEN, CENELEC,  
ETSI Workshop

## TV Broadcasting for All

Seville, 13-14 June 2002

Gran Hotel Renacimiento (Giralda Hall)  
Isla de la Cartuja s/n.  
41092 Sevilla, SPAIN

- With the Support of:
- The European Commission
  - ONCE Foundation
  - AENOR

## *Helping European citizens overcoming languages gap*

- ◆ Dubbing in other languages
  - very expensive and long delay (copyright: voice in the film)
- ◆ Subtitling in the original language:
  - simple, quick, un-expensive, (rights, ?copyright: added text)  
(+ language training)

for all users, seeing subtitles, even in the original language, helps understanding;  
for the hearing impaired users, this is the only means of understanding

*Subtitling is one of the most powerful  
learning and training tools of any language:  
by reinforcing what is being learnt by hearing,  
enriching the vocabulary, in context*

- ◆ There are technical solutions and pre-standards
  - work to be done to promote them at a European level
- ◆ Harmonisation as a *catalyst* to encourage the market
  - ensuring links to (or defences from) USA and Canada
  - >90% subtitled broadcasts USA/Can, 70% UK and Czech, 30% D, I,
  - *design for all:*  
extending to all users the experience of specific users
- ◆ Increasing in television subtitling + DVD and Web
  - large distribution, translation easier by common formats
- ◆ Risk of missing an important opportunity
  - it is time for establishing a reference starting group  
for TV, digital TV, DVD

Let's pause a second...  
Is this just a dream?



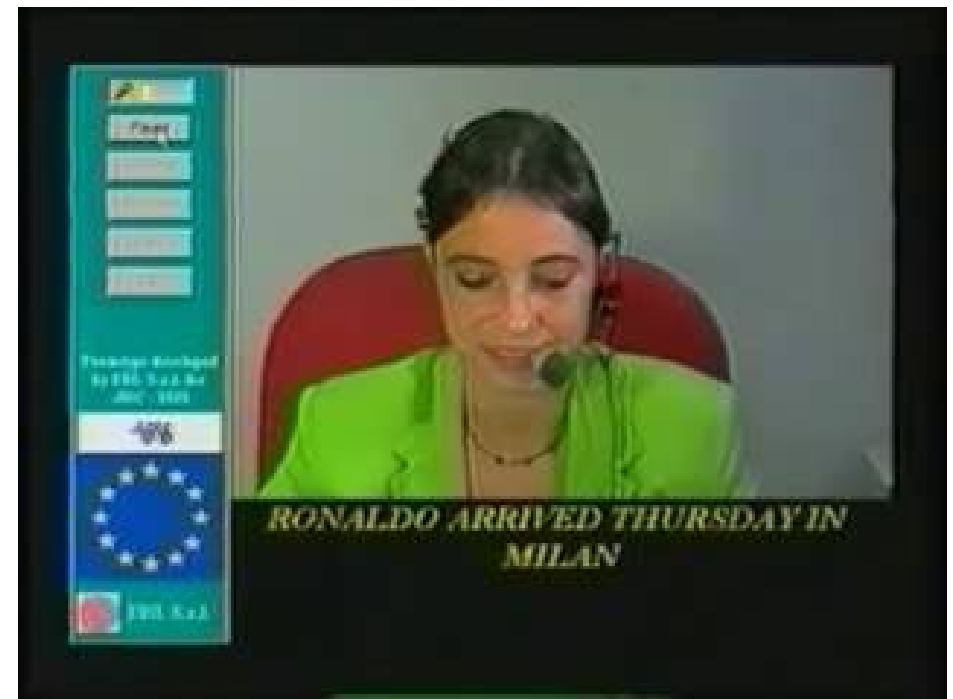


The most modern technological means 20 years ago





# VOICE Project's demos









# Reality better than dreams



- ◆ Multimedia
  - television, digital television, digital radio, film/cinema
  - video-cassettes, CD-ROM, DVD
- ◆ Synchronisation
  - on line: news, live broadcasts, sport
  - off line: films, documentaries, games; time-code: in & out
- ◆ Style
  - open caption (visible for all users)
  - closed caption (teletext page with subtitles)
  - full text or resumed/simplified text
  - number and position of lines: fixed or scrolling
  - colours' schemas and characters' font and size
- ◆ Users:
  - normally hearing users: subtitles only of voice
  - hearing impaired: subtitles of voice and of sounds (colours)
  - audience: statistics on teletext pages' users; advertising
- ◆ Tools: voice recognition, stenotype, manual keyboard
- ◆ **New tips: subtitles' indicator, sounds level meter, tele-command**





- Silent sequence in subtitled broadcast
- Fixed text in not subtitled broadcast







Rai Due



Rai Due









# Tables on <http://voice.jrc.it/tv>



	A	B	C	D	E	F	G	H
22	Albania	RTVSH		Radiotelevizioni Shqiptar	<a href="http://rtsh">http://rtsh</a>			
23	Algeria	ENTV		Entreprise nationale de Télévision	<a href="http://www">http://www</a>			
24	"	TDA		Télédiffusion d'Algérie				
25	Austria	ORF		Osterreichischer Rundfunk	<a href="http://www">http://www</a>			home@o
26	Belarus	BTRC		Belaruskaja Tele-Radio Campanija	<a href="http://www">http://www</a>			twr@twr.b
27	Belgium	VRT		Vlaamse Radio- en Televisieomroep	<a href="http://www">http://www</a>	no	yes	info@vrt
28	"	"	TV1	TV1	<a href="http://www">http://www</a>	"	"	info@tv1
29	"	"	KETNET/C	Ketnet	<a href="http://www">http://www</a>	"	"	info@ket
30	"	"	"	Canvas	<a href="http://www">http://www</a>	"	"	info@can
31	"	RTBF		Radio-Télévision Belge de la Communauté	<a href="http://www">http://www</a>			mediation
32	Bosnia-	RTVBH		Radio Televizija Bosne i Hercegovine				-
33	Bulgaria	BNR		Balgarsko Nationalno Radio	<a href="http://www">http://www</a>			<a href="http://www">http://www</a>
34	"	BNT		Balgarska Nationalna Televizija				
35	Croatia	HRT		Hrvatska Radiotelevizija	<a href="http://www">http://www</a>			hrt@hrt.hr
36	Cyprus	CY/CBC		Cyprus Broadcasting Corporation	<a href="http://www">http://www</a>			rik@cybc
37	Czech Republic	CR		Cesky Rozhlas	<a href="http://www">http://www</a>			
38	"	CT		Ceská Televize	<a href="http://www">http://www</a>			info@cze
39	Denmark	DR		Danmarks Radio	<a href="http://www">http://www</a>			dr@dr.dk
40	"	DK/TV2		TV2 / Danmark	<a href="http://tv2">http://tv2</a>			
41	Egypt	ERTU		Egyptian Radio and Television Union				
42	Estonia	EE/ETV		Eesti Televisioon	<a href="http://www">http://www</a>			etv@etv
43	Finland	FI/MTV		Oy Yleisradio Ab	<a href="http://www">http://www</a>			mtv@mtv
44	"	YLE		Oy Yleisradio Ab	<a href="http://www">http://www</a>			ihc@yle.fi
45	France	GRF		Groupement des radiodiffuseurs francais				
46	"	"	TF1	Télévision Française 1	<a href="http://www">http://www</a>			telespec
47	"	"	FT	France Television	<a href="http://www">http://www</a>			
48	"	"	FT2	France 2	<a href="http://www">http://www</a>			contact@
49	"	"	FT3	France 3	<a href="http://www">http://www</a>			
50	"	"	C+	Canal+	<a href="http://www">http://www</a>			<a href="http://esp">http://esp</a>
51	"	E1		Europe 1	<a href="http://www">http://www</a>			<a href="http://www">http://www</a>
52	"	ARTE		ARTE	<a href="http://www">http://www</a>			<a href="http://faq">http://faq</a>
53	"	AJC		AJC	<a href="http://www">http://www</a>			

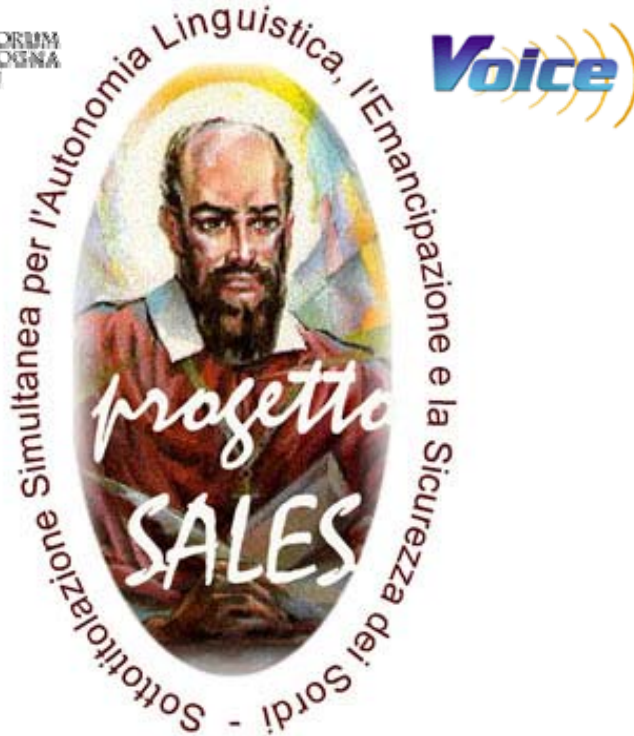


## Conference eAccessibility by voice



- ◆ Conference eAccessibility by Voice: VOICE Recognition supporting people with hearing or other disabilities
- ◆ JRC Closing Event for the European Year of People with Disabilities 2003 Ispra, 24 and 25 November 2003
- ◆ Participation of television broadcasters (BBC, RAI, ...), researchers, associations of people with disabilities (EFHOH, FEPEDA, EURO-CIU, RNID, ...), EU and local authorities
- ◆ Final Document of Conference: European Conference calls for more communication support for people with disability

- ◆ First international conference on new technologies in real time intralingual subtitling (Forlì, 2006)
- ◆ Live subtitled conference (Turin, last week)





# See you soon: Vancouver 2008



- ◆ International Congress for persons with hearing loss, organised by:
  - the Canadian Hard of Hearing Association
  - the International Federation of Hard of Hearing People



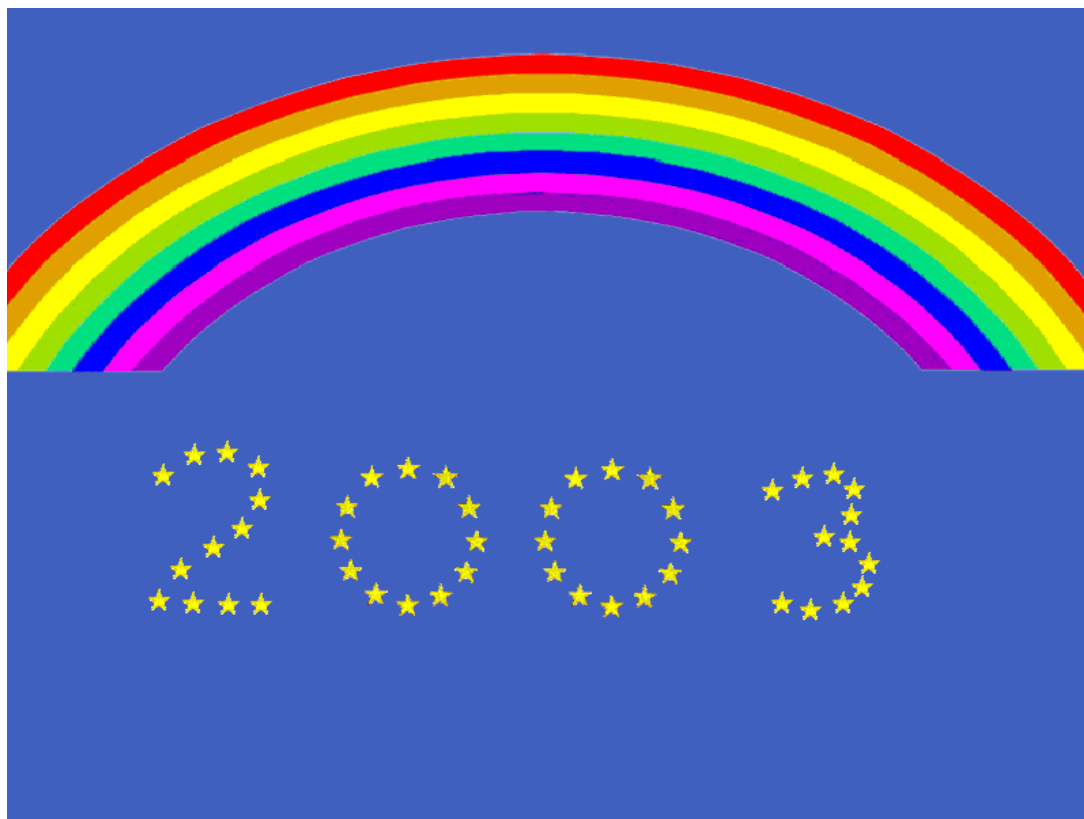
- ◆ 2-6 July 2008: Workshops, Panel Discussions and Poster Sessions
- ◆ Meeting of young adults from all across the globe to find out what issues young adults in other countries deal with, what has been implemented in other countries and what we can work on together as a global community



Arrivederci



***THANKS FOR YOUR ATTENTION !***



*[voice@jrc.it](mailto:voice@jrc.it)*  
*<http://voice.jrc.it>*

***THANKS FOR YOUR FUTURE COLLABORATION !***