

INTERLINGUAL LIVE SUBTITLING

perspectives in human-machine interaction

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perspectives in human machine interaction

1. Human-Machine Interaction
2. Live Editing and its facets
3. Typologies of Interlingual Live Subtitling
4. Assessment
5. Discussion



1. Human-Machine Interaction



HMI

introduction

“the design, evaluation and implementation of interactive computing systems for human use and with the study of major phenomena surrounding them”

(Hewett *et al.*, 1992: 5)



HMI translation

- Machine-Aided Human Translation (MAHT)
- Human-Aided Machine Translation (HAMT)



HMI

live subtitling

- HUMAN:
interpreter(s), producer(s), editor(s)
- MACHINE:
 - ENGINES: Speech-to-Text, Text-to-Text
 - INTERFACES: Subtitling, Editing, Viewing



HMI

mails and hails



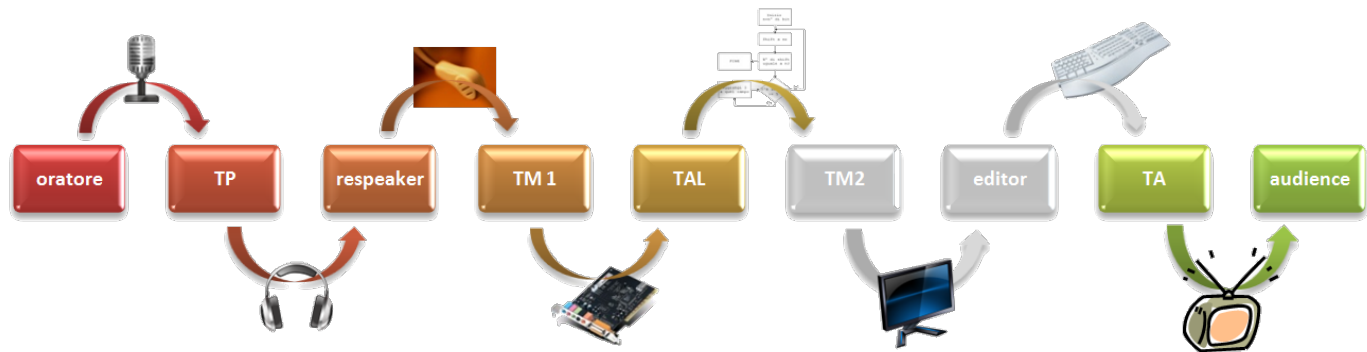
- Machine-Aided Interlingual Live Subtitling
- Human-Aided Interlingual Live Subtitling



2. Live Editing



LE



(Eugeni 2008)

(Marchionne 2011)



LE



- Pre-editing: while respeaking
- Peri-editing: before going on-air
- Post-editing: on-air

(Eugeni & Marchionne 2014)



LE

- Pre-editing: while respeaking
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- Post-editing: on-air

(Eugeni & Marchionne 2014)



LE

male and hale



- MALE: Machine-Aided Live Editing
- HALE: Human-Aided Live Editing

(Romero-Fresco & Eugeni forth.)



3. Interlingual Live Subtitling



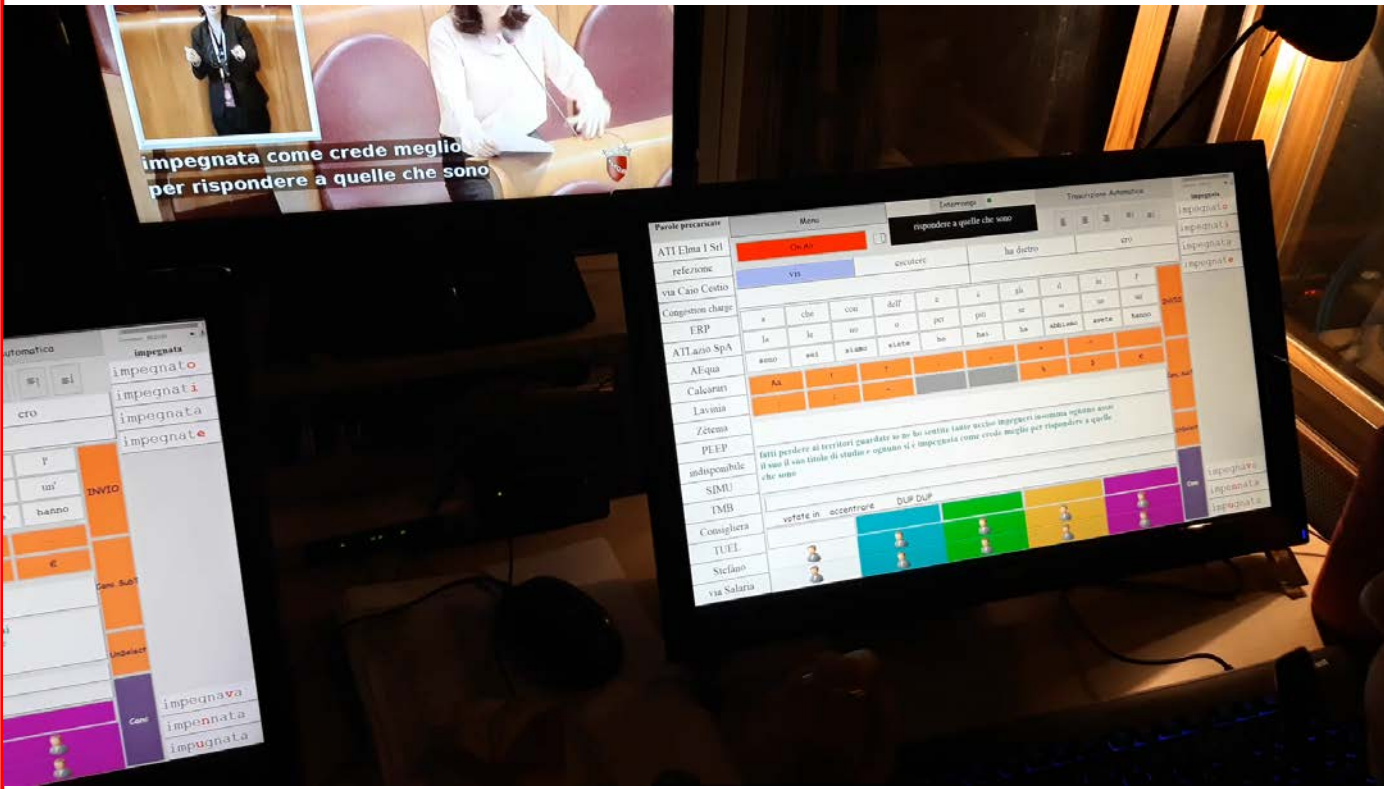
ILS

- **Machine-Aided Interlingual Live Subtitling**
 1. Interpreter > Intraling. ST > ASR > Live Ed
 2. Interlingual ST > ASR > Live Ed.
- **Human-Aided Interlingual Live Subtitling**
 1. Intralingual Subtitler > ASR > AT > Live Ed
 2. ASR > AT > Live Editor

(Romero-Fresco & Eugeni forth.)



ILS



ILS



4. ILS Assessed



Assess

	MAILS 1	MAILS 2	HAILS 1	HAILS 2
Words	79.6%	82.2%	87.7%	95.5%
WPM	110	114	121	132
IRA	97.3%	95.8%	91.6%	86.9%
NTR	0.2%	0.9%	3.9%	6.8%



5. Discussion



Discuss

- Live Editing doubles number of ILS types
- Live Editing improves quality of ILS but adds delay
- Intralingual Live Subtitling improves quality of ILS
- Intralingual Live Subtitling adds a semiotic channel thus increasing understanding by same-language speakers
- Interpreting makes speeches slower, thus increasing understanding by same-language speakers
- More automation increases reading speed and errors.
- Easy-to-Read Intralingual Live Subtitling doubles number of ILS types and increases understanding.

Thank you 😊

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www.respeaking2019.org



PLAIN



AIM: “essential information giving a co-operative target a chance of understanding it, in the same sense the writer meant” (cf. Cutts 2004: 4):

- **Transitivity:** Prefer active verbs, Use ‘you’ or ‘we’,
Avoid nominalizations
- **Mood:** Use words appropriate for the reader,
Give instructions
- **Theme:** Keep your sentences short (10-15 w.)
Use lists where appropriate

<http://www.plainenglish.co.uk>



CLAST (2015-2017)

PerVoice



SCUOLA SUPERIORE PER
MEDIATORI LINGUISTICI

Istituto riconosciuto con decreto Ministeriale 31.07.2003
Diploma equipollente al Diploma di Laurea in Scienze della Mediazione Linguistica

AIM: Automatic Subtitling and Dubbing
Technological Solutions for AV products

IRA – Idea-Unit Rendition Assessment (Eugeni 2017)

Non-rendered Idea Units		Rendered Idea Units				
Omissions	Misrepresentations		Repetitions	Alterations		
	Lexical errors	Grammar errors		Lexical errors	Grammar errors	
	semantic errors			semantic	sem.	non sem.

www.pervoice.com



LTA

(2018-2021)



AIM: training of the real-time intralingual subtitler (respeaker/velotypist)

IOs: 1: Skills sets and best practices

2: Modular curriculum

3: Online training materials

4: Online pilot course

5: Certification of profile + training

<https://ltaproject.eu>



Text-on-Top



<http://text-on-top.com>



President Speech

- SEMIOTICS: speech only
- TRANSITIVITY: “I/we/the board” (56),
you/delegates/the council (35), goals/aims (25)
- MOOD: hope/would (32),
regret/not understand/disagree (27)
- THEME: marked > unmarked



Quantitative data

			Plain E.	Aut. F./*	Aut. I./*
		Words	1990/2 191	2054/ 2387	1867/2 030
		WPM	110/12 1	114/13 2	103/11 2
		IRA	94%	88%/7 1%	92%/8 9%

* Compared with the Automatic Translation of the original

President Speech

President Speech

Qualitative data – Transitivity

- ORIGINAL: After the 50th Congress held in Budapest in July 2015, that symbolically concluded a life cycle of Intersteno...
- PLAIN: (...) The 50th Congress (...) symbolically concluded a life cycle of Intersteno...
- FRENCH:(...) Le 50e Congrès (...) a symboliquement conclu le cycle de vie d'Intersteno.
- ITALIAN:(...) Il 50 ° Congresso (...) ha simbolicamente concluso un ciclo di vita dell'Intersteno. (...)

President Speech

Qualitative data – Mood

- ORIGINAL: Recently - with objections that for me it is still hard to understand - an **Intersteno** Set of Professional Competencies and skills has been settled.
- PLAIN: Recently an **Intersteno** Set of Professional Competencies and skills has been approved even if it has been opposed (...).
- FRENCH: Récemment, un ensemble de compétences et de compétences professionnelles **intersessions** a été approuvé même s'il a fait l'objet d'une opposition (...).
- ITALIAN: Recentemente un gruppo **interstino** di competenze e abilità professionali è stato approvato anche se si è opposto (...).

President Speech

Qualitative data – Theme

- ORIGINAL: Drafted in the Statute passed in 2003 at the Congress of Rome these aims...
- PLAIN: These aims were drafted in the Statute passed in 2003 at the Congress of Rome.
- FRENCH: Ces objectifs ont été définis dans le Statut adopté en 2003 lors du Congrès de Rome.
- ITALIAN: Questi obiettivi sono stati redatti nello statuto approvato nel 2003 al Congresso di Roma.

President Speech

Qualitative data – tropes

- ORIGINAL: In Gent, for this reason, some delegates sang as great tits.
- PLAIN: In Gent (...) some delegates sang as great tits.

President Speech

Qualitative data – tropes

- ORIGINAL: In Gent, for this reason, some delegates sang as great tits.
- PLAIN: In Gent (...) some delegates sang as great tits.
- FRENCH: À Gand (...) certaines déléguées ont chanté comme de beaux seins.

President Speech

Qualitative data – tropes

- ORIGINAL: In Gent, for this reason, some delegates sang as great tits.
- PLAIN: In Gent (...) some delegates sang as great tits.
- FRENCH: À Gand (...) certaines déléguées ont chanté comme de beaux seins.
- ITALIAN: A Gand (...) alcuni delegati hanno cantato come grandi tette.