

## ***"REPORTING: abilities, technologies, organisations'***

With this heading a Congress was held in Trento on 2nd December 2006, hosted by the Centro Trentino di Ricerche which is, since 15 years, doing experiences about speech recognition in addition to many other interesting and important matters.

The Congress was organized by Accademia Aliprandi - Firenze, of which many Intersteno members are honorary associates: the Italian Senate and Chamber of Deputies gave their patronage. The Italian group of Intersteno practically supported this goal.

The programme of the lectures can be seen on [www.intersteno.it](http://www.intersteno.it) - events - Trento December 2006 ([http://www.intersteno.it/page.php/id\\_primario-34/language-inglese/](http://www.intersteno.it/page.php/id_primario-34/language-inglese/)) and in the programme the lectures will be gradually published. They will also be available on [www.accademia-aliprandi.it](http://www.accademia-aliprandi.it).

Many of the speeches were transcribed in real-time on a big screen, using stenotype technology.

I would like to report the main information and results of this meeting, which was attended by an important group of people.

### **Automatic transcript of speeches**

Dott Gianni Lazzari who is well known for his reports at Intersteno Congresses in Amsterdam and Vienna, and head of the department in which speech recognition projects take place, presented the results of a possible automatic reporting of assemblies discussions.

This possibility is now coming into reality, thanks to the improvements in hardware and software and the advancements in speaker independent speech engines designed by this Research Centre.

Experiments are going on in the Assembly of Provincia di Trento and at the Chamber of Deputies in Italy.

It is a batch process, i.e. it is not a real-time transcription, but it comes out from processing a digital recording. Thanks to improved algorithms both in detecting spoken words and using sophisticated automated language processing criteria, the results seem to be acceptable as a first draft. The software detects the various phrases and inserts the main punctuation signs (point and commas).

Of course, as shown by the experience with all means of reporting (traditional steno, stenotype, fast keyboarding or speech recognition), the results are mainly and directly linked to the quality of the speaker. The old saying 'garbage in - garbage out' is still valid. With a 'good' speaker, accuracy is over 94 %, while it largely decreases if utterance is very bad or words are missing.

It is to the reporter to be a 'purifier' who takes the dirty speeches and makes them comprehensible at the best, without changing the sense. And this task remains unchanged if this technology will be successful.<sup>1</sup>

## **Court reporting**

The date in which the Congress was held, was nearly contemporary of a new approach in court reporting activity in Italy. This was only due to fate, since the Congress was announced in February 2006 and even if at that moment there were rumours about what was happening, only on 16<sup>th</sup> November 2006 the new project was put into effect by the Ministry of Justice.

For a better comprehension I give here a few lines about the situation of court reporting in Italy before this last decision.

In 1988 the New Penal Code came into effect in Italy and the way in which trials took place, changed completely. The new 'rite' is now more similar to that used in United States, made famous all over the world by the Perry Mason TV serials.

After long evaluation and experimentations it was decided that court reporting had to be done with stenotype, but since at that moment only a limited number of stenographers using stenotype were available, all trial rooms were equipped with sound recorders produced by Philips.<sup>2</sup>

In principle the Ministry would have the duty to manage this situation with its clerks, but it became evident (for a lot of reasons) that this was not feasible and therefore it was decided to have an external help.

Between 1991 and 1993, many firms and professionals entered in the court reporting activity using stenotype (for which many training courses took place) or traditional keyboarding transcription using cassette sound recordings. As a matter of fact, even if the rules foresaw stenotype as the principal means of reporting, the '*Italian way*' (as I call it) was once again followed by inserting in the rules the words '*or other mechanical means*'. Nobody can rightly give interpretation about what is meant by 'mechanical means', but these words opened the use of alternatives to stenotype as it happened.

The firms in the various Italian regions, made agreements with the local Courts, based on a standard form prepared by the Ministry, which left the dealing about prices to each Court. This has created important differences in the evaluation on what was needed and paid at local level.

And this was the main reason why the Ministry entered into dealing with the Associations of firms in order to find a solution.

The solution came out with a bid, at which two groups of firms took part, on the basis of requests of the Ministry which decided also the prices for a standard page transcript (containing 1500 characters).

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<sup>1</sup> On this matter, I suggest you to visit this site [http://www.crim.ca/files/documents/services/rd/parole/RAP/RAP\\_Eng.htm](http://www.crim.ca/files/documents/services/rd/parole/RAP/RAP_Eng.htm), in which there is info about a similar experiment at the Cananadia Parliament.

<sup>2</sup> Information about court reporting in Italy was released by Marcello Melani on the occasion of the Intersteno Congress in Bruxelles - 1991

According to a research made by the Ministry on the data for 1994, 53.3 % of trials are recorded with transcript from sound recordings while 44.7 % are done with stenotype.

For very important trials in big rooms, audio-video recording is also available and witnesses are now admitted via video-conferencing.

The '**new way**' of producing court reports is based on the following steps:

1 - in the trial room there is a stenotypist who also take cares of the sound recording, **or** by a person who only take cares of the sound recording.

2 - a CD is produced a the end of the trial, this helps steno typist to check her/his work or it is used to transcribe using keyboarding or other means.

3 - **delivery time of the final transcript** is the following day when stenotype is used, and 3 following days if transcript is used. It stenotype is on duty, the Judge can have a first draft of the stenotype recording.

4 - **transcripts** are released in printed format but in a standard electronic format **have to be loaded into a server** on which also the Chancelleries of the courts must enter the calendar of the trials. Therefore subsequent checks, calculations of the amount dues etc. can be easily made.

The **server is managed by a Company** which is part of the group of firms who won the bid and the cost for this service is paid in addition to the price per page.

In the last two years the Ministry has replaced the Philips equipments, with new ones produced by an Italian firm. These equipments produce a digital record and, as said before, at the end a CD is burned.

The **trial rooms in Italy are about 2400, but 1700** is the estimated maximum number of working per day.

Trials are taking place from Monday to Saturday between 9 o'clock till 14 o'clock. But several trials, as per example the ones dealt by Court of Assize (Assizes), are generally lasting the whole day and they continue the following day so in this case stenotype is absolutely needed.

The Ministry, based on the previous data, has foreseen a maximum budget of **6,5 millions of pages**.

This complex activity had to be put into effect within 15 days after the communication of the Ministry, therefore a lot of working and adjustments had to be made by the winner of the bid.

One of the main problems to be faced is the standardization in producing the reports not only in a standard electronic format, but also on what is to be inserted. The quality of the report is based on the ability and experience of the reporter which has to be continuously monitored and checked, therefore education plans have to be put into effect for this important goal.

### **Assembly reporting**

Contribution on these topics were made by managers of the Chamber of Deputies and the Senate.

From these contributions the following aspects emerged:

- the need of reporting within short time in order to deliver sound and reliable information via Internet. Information must be checked previous to release, in order to avoid misunderstandings. This is a crucial point linked to the education of reporters not only on a specific technology, but on linguistic and procedural aspects.
- the ways for checking (also with the help of automated language software) the quality and consistency of reports when they are made by several reporters as it is usually the case in these environments
- the question about the timing for release and the quality needed to-day for verbatim reports, since media (TV - Internet etc) permits to everybody to follow a debate in real-time, thus solving the primary goal of publicity which was the main goal of verbatim reports (Hansards) till now.

The main message from these reports was about education and quality of reports.

### **Net of free-lance professionals.**

Many professional reports are not involved in court-reporting and are mainly devoted to Congress - meetings and so on.

This is frequently a part-time job partially for a choice of life and partially linked to the specific type of business in which not every day there is the need of reporting, and not in all cities this happens.

Moreover there can be an excess of demand in certain period of the year, which cannot be fulfilled by a single reporter.

Taking into account these needs, a software firm in Rome has improved its tools and put them in Internet. This firm is involved since many years in reporting, especially with digital audio recording and transcription with speech recognition.

These tools will be available at the site [tr@scrivi.it](http://tr@scrivi.it) at the beginning of next January with client-server software.

The proposed solution permits to professionals who intend to take advantage of this software, to manage the following procedure:

- a - the site of the event (assembly - congress - meeting etc) send the audio though Internet to the server
- b - the audio is saved in a specific area of the server, which is accessible only to the specific reporter
- c - from another computer connected to Internet (and therefore in any place like his office, home etc.) the reporter can see and process this recording. The digital audio can be split in several pieces of a predefined time (for example 10 minute, the traditional 'turns' as they are usually called).
- d - the list of audio recordings are shown and the reporter or several reporters can prepare the report using speech recognition, traditional keyboard or stenotype
- d - a tool for transcription is also available, permitting to reduce the speed of the speech, thus facilitating transcript. This tool can be connected with a foot pedal

e - a person can revise (edit) the text transcribed and approve it for preparing a complete document in which the various pieces are progressively collected.

A presentation showing this process will be shortly available on [www.intersteno.it](http://www.intersteno.it) as well as other speeches released on this occasion.

Thanks to this programme, several reporters can be integrated in a net of activity and therefore be able to give better service and also get works from other towns or nations.

Of course also in this case, when different persons are working on the same event, the need of coordination and strict control of the quality is a must, for this reason it is foreseen a persons who checks and edit the text. This person is not usually needed when the reporter works alone.

### **e-working in the reporting field**

The afore mentioned ways of reporting clearly indicate that e-working is now a reality also in the reporting activity.

As a sound demo of this possibility the speech of Fausto Ramondelli was reported in real-time by a steno typist leaving in Nuoro - Sardinia. Nuoro is on the top of a mountain of that isle, and is about 800 kilometers from Trento. The voice of Ramondelli was sent to her via Skype and on the same computer the words came out transcribed by the reporter.

By the way this reporter is Rachele Addis who took part, on several occasions, at the Intersteno competitions.

Notwithstanding my confidence with information technologies, and participation in national and international projects on e-working, I must admit that I was emotionally moved in seeing the words on the screen produced by this young lady.

Many dreams are really become true.

### **The *fil rouge* of the event**

Nearly every speaker has recalled the need of good quality of reports, which can only be obtained with well trained staff. Education in a broad sense is absolutely needed and is a challenge for all persons involved in this activity.

It would be interesting to have a better knowledge of what is happening in other countries. May be an International congress, involving Intersteno, could be a good opportunity, if the representative of other Countries are able to arrange contacts in this specific kind of activity which is strictly linked to the goal of our Federation.

*Gian Paolo Trivulzio  
9<sup>th</sup> December, 2006*