IVY – INTERPRETING IN VIRTUAL REALITY

Report to accompany Deliverable 5.2

Video Corpora

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DEVELOPMENT OF VIDEO CORPORA

The objective of Task 5.2 was the development of additional corpora.

The University of Cyprus and Bar Ilan University in Israel compiled three corpora of spoken video interviews in the natural narrative format featuring speakers talking about professional and cultural issues. These corpora comprised:

- a corpus with 20 video-recorded interviews in Greek

- a corpus with 10 video-recorded interviews in Hebrew and

- a corpus with 10 video-recorded interviews in Russian

These corpora complement the corpora available from the BACKBONE project and served as source material for the creation of Greek, Hebrew and Russian monologues and bilingual dialogues (cf. Deliverable 5.1) for the IVY 3D virtual learning environment.

In addition, the University of Tübingen and the Steinbeis Transfer Center Language Learning Media (StC) edited and annotated 39 video-recorded natural narrative interviews in English for IVY use in the BACKBONE search environment to replace the originally planned use of audio-recorded dialogues.

This report accompanies the corpora and provides an overview of what has been developed in Task 5.2.

1. THE GREEK CORPUS

Konstantinos Kritsis and George Floros, University of Cyprus (Cyprus)

The Greek corpus was created in two different countries (Cyprus and Greece) and in four cities (Nicosia, Athens, Larissa, and Trikala). There are two reasons why we decided to talk to speakers in these four cities: the first reason was that we wanted to have not just real professionals talking about their jobs/work but also to do the recording in their actual work environment so as to make them feel more comfortable and allow for their speech to flow more naturally and freely. The second reason was that we wanted to try to maximise speech diversity by having a near-equal number of male and female voices, of different ages and with different accents.

As far as the topics we covered are concerned, we sought to align ourselves with the issues discussed in the existing BACKBONE corpora, that is:

- Sports and health (where we discussed about the revival of the Classic Marathon in Athens and homeopathy as a form of alternative medicine)

- Economy and politics (where we talked about the Greek debt crisis, the discovery of natural gas in Cyprus, the Arab Spring)

- Tourism and environment (where we talked about the Common Agricultural Policy of the EU, Greek tourism and hotel industry, the recycling industry in Greece)

- Social issues (where we talked about the work of an NGO in Cyprus and the Cypriot dialect)

- Education (where we talked about the new National Curricula in Cyprus and the work done in a bilingual preschool and nursery centre in Athens)

- Technology (where we talk about alternative sources of energy and the archives of the National Bank of Greece)

- Law and government (where we talked about the process of and difficulties of setting up a company in Greece, the reforms brought about by «Kallikratis» plan for Local Government)

- Arts and history (where we discussed the new Acropolis museum and teaching theatre in Greek schools)

The Greek video corpus consists of 4 monologues (with an average length of 9 minutes and a total length of 35 minutes) and 16 dialogues (with an average length of 16.5 minutes and a total length of 4 hours). The video recordings are available on the project's FTP server for further exploitation.

Type and duration	Domain and Title	Speaker	
Dialogue 4:34	Sports and health *The Athens Classic Marathon*	Tota G. *Sports manager*	
Dialogue 13:08	Economy and politics *Discovery of natural gas in Cyprus*	Pantelis S. *Economist – Political analyst*	
Dialogue 15:37	Economy and politics *The Greek debt crisis*	Costas L. *Economist*	
Dialogue 14:30	Tourism and environment *The Common Agricultural Policy of the EU*	Kostas B. *Economist*	

Dialogue 20:04	Tourism and environment *Tourism and hotel industry in Greece*	Pavlos P. *Hotel manager*	
Dialogue 10:59	Social issues *Home for Cooperation, Association for Historical Dialogue and Research*	Chara M. *Teacher / NGO activist*	
Dialogue 14:16	Social issues *The Cypriot-Greek dialect*	Elena I. *Linguist*	
Dialogue 10:42	Education *The new national curricula*	Stavroula T. *Linguist*	
Dialogue 15:37	Education *A bilingual preschool and nursery centre*	Natasha C. *Preschool teacher / Child psychologist*	

Dialogue 12:14	Technology *The Greek IT market*	Tassos C. *Retail sales manager*	
Dialogue 22:06	Technology *Alternative sources of energy*	Stavros K. *Mechanical engineer*	
Dialogue 14:26	Technology *The Historical Archive of the National Bank of Greece*	Ypapanti K. *Archivist*	
Dialogue 18:24	Law and government *Setting up a company in Greece*	Ioannis T. *Lawyer*	
Dialogue 14:30	Law and government *The Hellenic National Cadastre*	Elena B. *Rural and surveying engineer*	
Dialogue 28:33	Arts and history *Archaeological excavations and the Acropolis Museum*	Vassilis L. *Archaeologist / Art historian*	

Monologue 10:48	Arts and history *Drama classes in Greek schools*	Anthony B. *Actor / Drama teacher*	
Monologue 06:34	Sports and health *Homeopathic remedies*	Sotiris B. *Homeopathic physician*	
Monologue 07:59	Economy and politics *The Arab spring*	Pantelis S. *Economist – Political analyst*	
Monologue 08:28	Tourism and environment *The recycling industry in Greece*	Ioannis T. *Lawyer*	
Monologue 11:54	Education *The new national curricula*	Stavroula T. *Linguist*	

The technical challenges we faced rose out of the necessity to create something that would be used in two different settings, namely the IVY 3D virtual learning environment and the BACKBONE environment. These challenges could be summarised in the known expression "Lights. Sound. Camera. Action". And the reason for this is that we experienced problems with all four of them, both during the pre-production and the post-production process.

One of the main problems we faced in pre-production, for example, was our choice of camera. Having initially opted for a fixed lens camera with an internal microphone, we soon came to realise during our test recordings that in order to get good sound levels out of it, we had to put the camera extremely close to the interviewees and thereby to lose much of their gestures. This would have been suitable for the 3D virtual environment in Second Life (where only the audio of the interviews would be used) but not so suitable for future integration into the BACKBONE environment (where both the audio and video of the interviews were to be used). Conversely, putting the camera too far away meant that although we would have a good frame (good for BACKBONE) we would have problems with the audio (not so suitable for the Second Life environment). The solution was not to attach a wide-angle lens to the camera (which we did only to come to the conclusion that that it just distorts the image) but to use a different camera altogether with an external lapel microphone. This way we managed to get the best of both worlds, as it were.

As far as the challenges we faced in post-production are concerned, these were primarily related to the editing process of the audio of the video. Removing background noises that were picked up by the external microphone (despite our best efforts to do our recordings in silence) without distorting the overall sound quality proved to be particularly difficult, as was putting the audio back into the video and synchronising it.

2. THE RUSSIAN AND HEBREW CORPORA

Miriam Shlesinger and Tanya Voinova, Bar-Ilan University (Israel)

The development of multilingual content for the IVY environment was based on a number of earlier corpus-based research and development initiatives in the field of language learning and, to a certain extent, interpreter training. Most of the project teams used the multimedia corpora available from the LLP project BACKBONE (English, French, German and Polish) and the ELISA corpus (English) to create monolingual monologues and bilingual dialogues for the practice of business and community interpreting. However, to extend the range of languages available in the IVY environment, the University of Cyprus (Cyprus) and Bar-Ilan University (Israel) focused on creating the new corpora before joining the other teams in selecting and creating the actual monologue and dialogue material for the virtual environment. Presenting a mixture of narrative and interactive recordings, the Hebrew and Russian corpora comprise 10 videos in each language. The new corpora were created with a view to transforming some of the material into bilingual dialogues. Hence there was a mixture of narrative and interactive recordings.
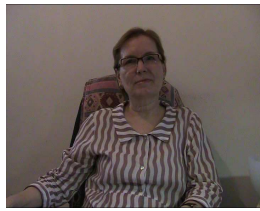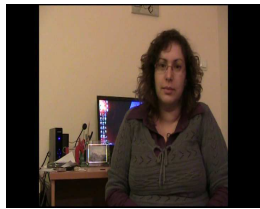
Bar-Ilan University focused on creating two corpora. It should be mentioned that there are two official languages in Israel: Hebrew, which is the most prevalent official language, and Arabic. However, Israel is a multicultural, multilingual country with an unusually large array of ethnic, cultural and linguistic minorities. For instance, there are more than one million immigrants from FSU, and they comprise a distinct community of Russian speakers – the third largest ethnic group after the two indigenous ones (Jewish and Arab). Being a research assistant to Prof. Shlesinger (and a member of the Russian-speaking community), we decided and were encouraged to create two corpora – the Russian and the Hebrew – that would be useful for student-interpreters from the Russian and Hebrew-English tracks in the Department of Translation and Interpreting studies at Bar-Ilan University and abroad.
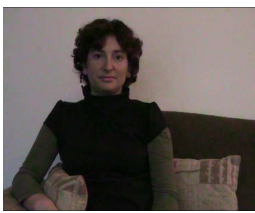
The Russian corpus (see Table 2) consists of 10 monolingual interviews which were video-recorded and transcribed. Seven interviews were conducted with female speakers and three with male speakers. The total duration of the interviews is 113.08 minutes (the average duration of an interview is 11.31 minutes).

The IVY 3D virtual learning environment includes a range of domains and virtual scenarios for the simulation of interpreting situations including a meeting room, workshop space, seminar room, medical setting, community centre, sports ground, and outdoor setting. We thus had to find participants who could speak about topics that could be situated in these kinds of scenarios and that were similar to those found in the already existing

BACKBONE corpora that were used in IVY. The Russian corpus covers the following topics: Ufa Train disaster from the point of view of a paediatric intensive care physician, working as a nurse, LGBT activism, work in a Georgian restaurant, EURO-2012, Sport for moms, Competitive Intelligence in an IT company, health and the LGBT community from the point of view of a medical social worker, research on index of women's security, dog training.

Table 2: The Russian corpus

Interview title / content	Speaker info	Duration	Domain
Ufa Train disaster from the point of view of a paediatric intensive care physician	Vladislav V., MD	11:38	Community and healthcare
Profession - a nurse	Natalia V., nurse	11:25	Community and healthcare
LGBT activism	Elena G., LGBT activist	11:06	Community and healthcare
Work in a Georgian restaurant	Eka, works in a Georgian restaurant	10:19	Business, Politics, Industry
EURO-2012	Dmitry A., sportswriter	12:18	Sports

"Mama-net" – sport for moms	Lena, "mama-net" player	8:31	Sports
Competitive Intelligence in an IT company	Jenny S., expert in commercial intelligence	10:11	Business, Politics, Industry
Health and the LGBT community from the point of view of a medical social worker	Anna T., medical social worker	14:11	Community and healthcare
Research on index of women's security	Assia I., researcher	13:28	Arts, Education, Travel
Dog training	Volodya D., dog trainer	11:21	Business, Politics, Industry

As for the Hebrew corpus (see Table 3, below), ten interviews were conducted, four with men and six with women; all of them were videotaped and transcribed as well. The total duration of the interviews is 111.55 minutes (the average duration of an interview is 11.16 minutes).

Guided by the same principle of selecting similar topics to those found in the existing corpora, we conducted interviews that would fit the six different types of scenarios of the IVY 3D virtual learning environment: sports ground, medical setting, meeting room, classroom, community centre, and seminar room. The Hebrew corpus covers the following topics: Group cycling, ethnic music, hidden themes in Harry Potter, working with people with aphasia, raising a child who has Celiac disease, training in creative and expressive therapies, growing up on a kibbutz, fear of public speaking, constructing the collective memory, choosing the right kind of school for our children.

Each recording was based on short questions and a combination of longer and shorter answers.

Table 3. The Hebrew corpus

Interview title / content	Speaker info	Duration	Domain
Group cycling – no longer just a winter sport	Tamir D., spinning instructor (m)	12:26	Sports
Ethnic music in a melting-pot society	Moshe N., percussionist (m)	12:54	Arts, Education, Travel
Hidden themes in Harry Potter	Dina M., a recent high school graduate (f)	10:56	Arts, Education, Travel
Working with people with aphasia	Daphna O., speech pathologist (f)	11:42	Community and Healthcare
Raising a child who has Celiac disease	Anat, mother whose daughter has Celiac disease (f)	13:34	Community and Healthcare
Training in creative and expressive therapies	Yair A., a student of dance therapy (m)	11:11	Community and Healthcare
Growing up on a kibbutz	Harel K., grew up on a kibbutz (m)	11:40	Business, Politics, Industry
Fear of public speaking	Dr. Yael S., clinical psychologist (f)	9:33	Community and Healthcare
Constructing the collective memory	Dr. Dalya G., an expert in CDA and political discourse (f)	10:55	Arts, Education, Travel
Choosing the right kind of school for our children	Dr. Michal S., mother of two children (f)	9:04	Arts, Education, Travel

The interviews in both corpora served as a basis for monologues and bilingual dialogues for the 3D virtual learning environment (cf. D 5.1). The video recordings are available on the project's FTP server for further exploitation and will be made available to those who teach interpreting from/into Hebrew and Russian in Israel and beyond. While the teaching of Hebrew interpreting primarily takes place in Israel (at our own university), the teaching of interpreting from/into Russian takes place at various institutions.

3. THE IVY ENGLISH CORPUS WITH ANNOTATIONS OF INTERPRETING CHALLENGES

Petra Hoffstaedter (StC) and Kurt Kohn (University of Tübingen)

At the IVY kickoff meeting, it was agreed that the audio-recorded German, English and French dialogues originally indicated in Task 5.2 of the project proposal were at a much lower proficiency level than would be suitable for interpreter training. It was felt that it would be more appropriate to use the video-recorded natural narrative interviews available from the ELISA corpus[1] (http://corpora4learning.net/elisa) and other interviews available at the StC to replace the originally envisaged audio-recorded materials (cf. Minutes of the first IVY project meeting, Guildford, 2-5- March 2011).

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[1] *English Language Interview Corpus as a Second-Language Application* (developed by Dr Sabine Braun (then of University of Tübingen).

Based on the available video materials, the University of Tübingen and the Steinbeis Transfer Center Language Learning Media (StC) edited and annotated a total of 39 video-recorded English natural narrative interviews to create a dedicated IVY corpus annotated with a particular focus on interpreting challenges.

The available interviews were adapted to the format required by the BACKBONE Annotator and the BACKBONE Search Interface. As a first step, this included transcribing and time stamping the available video-recorded interviews. The interviews were then annotated with the BACKBONE Annotator with regard to topics and interpreting challenges (cf. Fig. 1).

Topic categories for the annotation were specified based on the analysis of the interviews. In addition, they reflect the topics suitable for the scenarios available in the IVY 3D virtual learning environment. The topics covered include the following areas: cultural and educational issues; environment; healthcare; personal, political, social and legal issues; media and new technologies; places and regions; and the world of work and business.

A particular emphasis was placed on the analysis and annotation of interpreting challenges. Based on insight from research[2] and following a detailed analysis of the interviews, the IVY team agreed on a set of categories for the annotation of potential interpreting challenges.
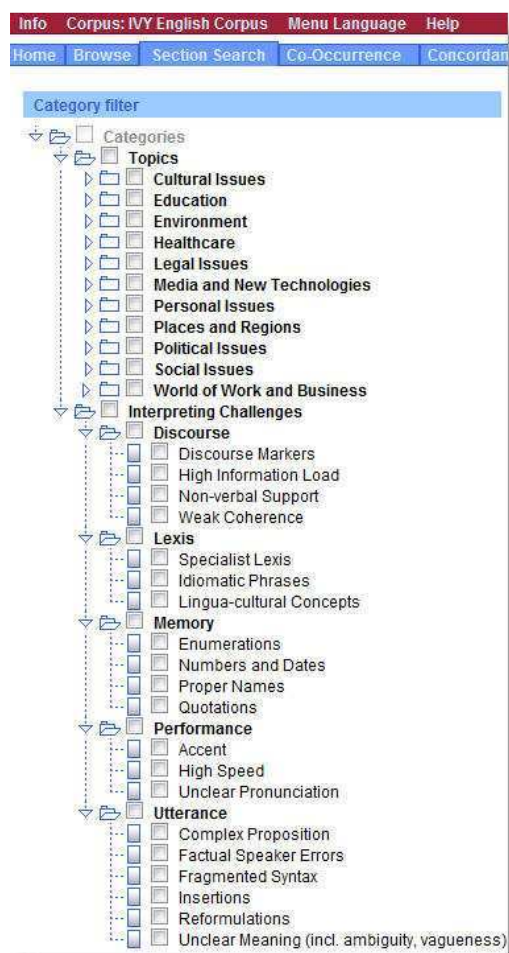

Fig. 1 Annotation & search categories

The annotated challenges cover aspects on discourse, lexis, memory, performance and utterance level:

- Discourse – discourse markers, high information load, non-verbal support, and weak coherence

- Lexis – specialist lexis, idiomatic phrases, lingua-cultural concepts

- Memory – enumerations, numbers and dates, proper names, quotations

- Performance – accent, high speed, unclear pronunciation

- Utterance – complex propositions, factual speaker errors, fragmented syntax, insertions, reformulations, unclear meaning

The annotated IVY English corpus can the accessed through the BACKBONE search interface, which offers a wide range of search and practice options that enable users to search for pedagogically relevant interview sections including the corresponding video clips and transcripts.

In the BACKBONE Search interface (http://purl.org/backbone/searchtool), users can select the IVY English Corpus (cf. Fig. 2) and access the corpus in different search modes – Browse, Section Search, Co-occurrence, Concordances and Lists – which all focus on different pedagogically relevant search options.

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[2] cf. Braun, Sabine & Kurt Kohn (2012). Towards a pedagogic corpus approach to business and community interpreter training. In B. Ahrens, M. Albl-Mikasa & C. Sasse(eds). *Dolmetschqualität in Praxis, Lehre und Forschung*. [Festschrift für Sylva Kalina]. Tübingen: Narr, 185-204.
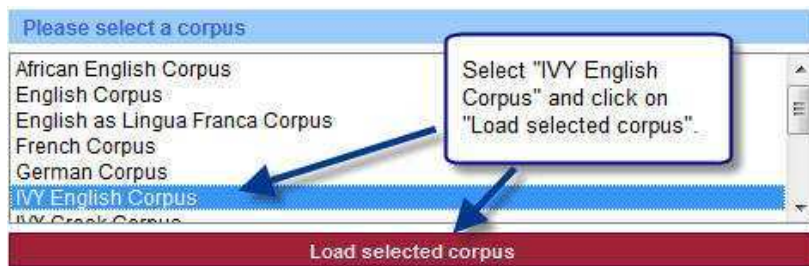
Fig. 2: Accessing the IVY English Corpus at http://purl.org/backbone/searchtool

The Browse mode (Fig.3) provides an overview and short description of all the available interviews. Users can play the videos, play or download the audio files, and access transcripts of the interviews.
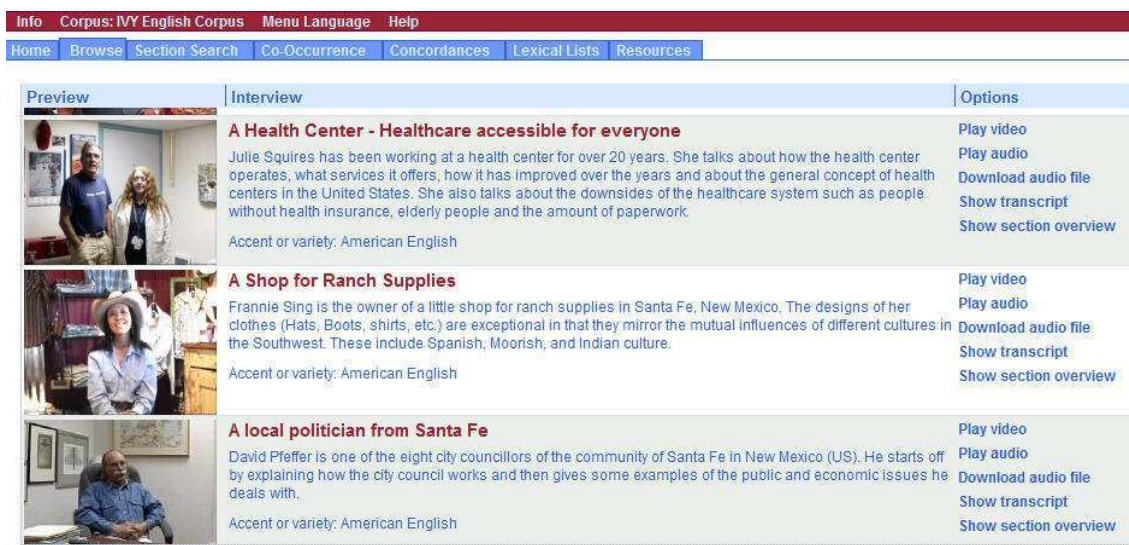

Fig 3: Browse mode of the IVY English Corpus

Access to potential interpreting challenges is provided in the Section Search mode (cf. Fig. 4), where students can search for sections with particular challenges and play the corresponding video section to perform different interpretation-related tasks, from analysing potential challenges to note-taking and interpreting.
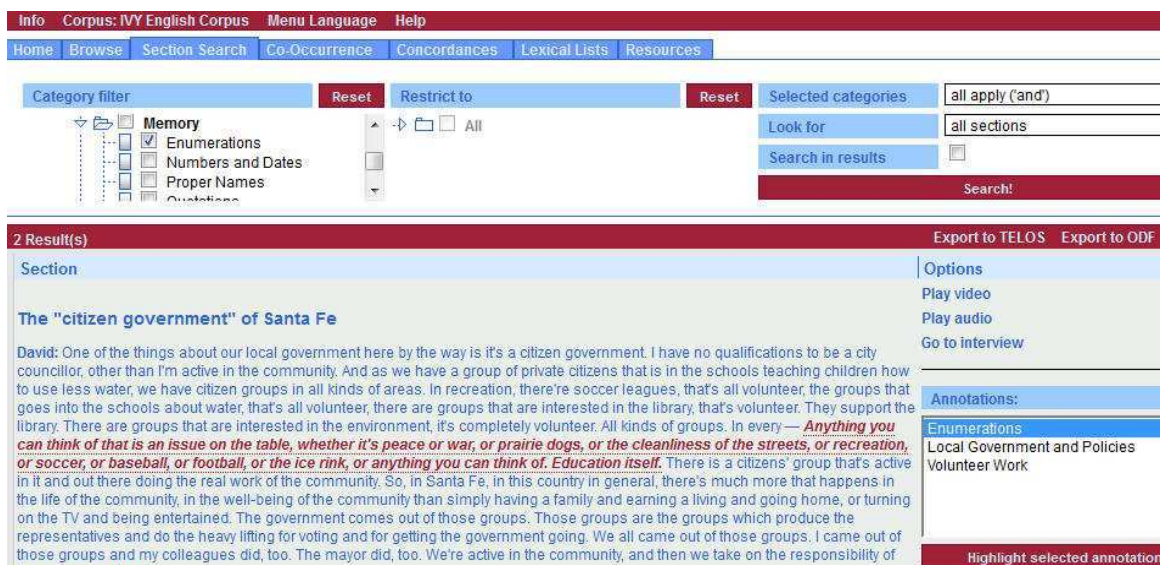

Fig. 4: Section Search result for the search category "enumerations" imposing a memory-related interpreting challenge

Last but not least, the Co-occurrence Search, Concordances Search and Lexical Lists functions support various lexical searches. In IVY, all the different search options of the BACKBONE search interface were used for preparatory learning activities preparing students for different interpreting tasks in the 3D virtual learning environment (cf. the report on D 5.3).