

Telos Language Partner: Multimedia language learning, authoring and customisation

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1. Introduction

The classical demand for “international” European languages and language learning is growing. At the same time, new demands can be identified for lesser taught languages and work-related communication needs.

Multimedia and telematic technologies offer a promising potential for developing and implementing pedagogically viable solutions helping to bridge the dramatically widening gap between teaching capacities and learning demands. Technological initiatives, however, should only be embraced on the basis of

- (1) a careful analysis of communication and language needs (“linguistic audit”);
- (2) a good understanding of the pedagogical value of available technology-based language learning options;
- (3) a sound concept for the integration and embedding of these options in a broader pedagogical context;
- (4) a realistic cost/benefit analysis.

In this article, the main emphasis will be on the second and third of these requirements. We will begin with a brief discussion of aspects of quality and feasibility in multimedia language learning; followed by a description of *Telos Language Partner (TLP Pro)*, a multimedia application supporting an integrated approach of language learning, authoring and customisation.¹ We will then specify pedagogical models and guidelines for using *TLP Pro* for the production of a range of multimedia language learning resources and courses including Internet delivery.

¹*Telos Language Partner* (system requirements: Pentium PC with CD-ROM drive and sound card; Windows 3.11, 95, NT) was developed and evaluated with support from the European projects “Eloquent” (Lingua) and “Telos” (Telematics Applications Programme, ET 3005). For more information on the Telos project, see <http://www.telos.uni-tuebingen.de>; information on *Telos Language Partner* is continually updated at <http://www.linguaplan.de>.

2. Multimedia-enhanced language learning

Quality in telemedia training has many dimensions; the following ones are of particular importance with regard to learning languages.

2.1. *Learner activities*

Learning is an active process in which learners are the principal agents. The ‘burden’ of learning is inevitably on the learner; and it is in this sense that one is justified to see the very essence of learning in self-study activities. Learning can only be successful to the extent that learners become actively engaged in learning processes of varying degrees of autonomy and self-organisation. Teachers and tutors as well as learning materials – traditional or multimedia – play a supporting and facilitating role in this process.

What is it then that language learners should be able to do in the self-study mode? From the perspective of communicative language learning, three main activity dimensions can be identified:

- learners should be able to practise communication skills in connection with video situations, dialogues and texts;
- they should be able to develop their linguistic (grammar, vocabulary) and cultural knowledge;
- and they should be able to look-up linguistic and cultural information.

A first requirement multimedia language learning materials should meet concerns their potential for supporting relevant learner activities on these three dimensions. While it is certainly true that multimedia technologies make a significant contribution to the improvement of language learning in the self-study mode, the requirement of relevance is anything but trivial and negative examples are easy to find. Even in seemingly highly interactive multimedia language courses the gap between rather trivial multimedia “mouse click” activities and communicative language activities tends to be painfully wide; and the current emphasis on automatic feedback and control is not always in keeping with the requirement of active (and autonomous) learning.

A second requirement concerns the validity of learning, that is the degree to which learning tasks and activities enable learners to attain the intended learning goal. Validity is closely related to authenticity. It is generally believed that learning activities achieve better validity when they are embedded in or modelled on the basis of those real-life situations which are the very goal of learning.

Multimedia learning modules that exploit the text, sound, picture and video capabilities of the current PC are particularly well suited to support language learning in authentic situations with authentic contents and thus to ensure the desired communicative learning outcomes. In a multimedia environment, authenticity of language learning can be achieved through simulations of everyday-life communication (private or at the workplace) or through language learning extensions that are embedded in genuine communicative activities in connection with, e.g., watching TV/video for the primary purpose of specialised subject learning or cultural edification and entertainment.

2.2. *Tutor activities*

Traditionally, teachers (and tutors) select their learning materials from published resources (books, audio and video tapes); they adapt clips from newspapers, radio or TV; and maybe integrate some of their own exercises; teachers modify, add and customise to meet the needs of their learners. In a nutshell: teachers act as a kind of “interface” between external learning resources and their learners’ individual needs.

Currently available multimedia contents and learning materials (e.g., language courses on CD-ROM), however, provide little room for customisation and pedagogical embedding. More often than not, tutors find themselves reduced to the pedagogically rather unattractive role of a “multimedia DJ”, whose tutoring power is restricted to handing out prefabricated CD-ROMs. In a multimedia learning environment tutors are thus threatened of loosing an essential part of their tutoring power. This is certainly one of the factors responsible for the apparent discrepancy between multimedia hopes and expectations on the one hand and so far disappointing results on the other.

Against this background, it is of strategic importance to give “multimedia tutors” full control over multimedia learning contents. Tutors need to be able to reuse, adapt and supplement existing materials in order to create their own customised multimedia learning packages. This requires two things: first, a multimedia authoring tool that can be used by non-specialists; and second, access to reusable multimedia learning resources (from video-based situations to dialogues and texts, from grammatical and lexical explanations and exercises to cultural notes) that are “open” for further multimedia processing and pedagogical adaptation.

2.3. Pedagogical integration

A common concern among tutors is focused on the question of whether they will “survive” the invasion of computers into the classroom and the innovations brought about by multimedia and telematics. The answer is simple (and should be borne in mind by both critics and defenders): tutors will not be replaced by the computer; but tutors who are able to make best use of the computer in the broader context of learning and teaching will have a significant advantage over those who are not.

An important part of this message is that multimedia “solutions” should not be seen in isolation from or in opposition to the overall human dimension of learning and teaching. What is needed is a multimedia platform that facilitates the integration of different modes of learning and teaching – from classroom teaching to self-study learning and tele-tutoring.

Any proposal for a multimedia contribution to language training should be judged on the basis of the value it achieves within a unified pedagogical approach.

2.4. Feasibility

In the present context, feasibility is understood as both a technological and a financial dimension of quality. Two requirements of feasibility are of particular importance:

- The cost and time effort necessary for tutors to produce and customise multimedia language learning contents should be realistic and justifiable. This should also hold for lesser taught languages.
- Learners should have low cost access to multimedia learning contents and tele-tutoring services. This should include access from within a training centre, from their work-place, or from home.

3. Telos Language Partner

3.1. Approach

Telos Language Partner (TLP Pro) is a multimedia PC-software designed to incorporate the quality dimensions of multimedia language learning and tutoring mentioned above. The software, which has

been developed and evaluated with support from the European projects “Eloquent” (Lingua) and “Telos” (Telematics Applications Programme), supports relevant and authentic language learning activities. Intuitive editing functions facilitate the low-cost production, customisation and flexible pedagogical embedding of multimedia language learning contents.

Development work set out from an analysis of what learners should (and would want to) be able to do in the autonomous ‘self-study’ mode – which itself may be pedagogically integrated with classroom teaching or tele-tutoring (LAN or Inter/Intranet).

Prototypical learner activities were identified ranging from communicative practice with texts, dialogues and video clips to lexical and grammatical explanations and exercises, cultural notes and lexical look-up. In *TLP Pro*, these learner activities are supported by corresponding multimedia templates, for instance templates for dialogue practice or gap-fill. With its two modes of operation, a Learning Mode and an Editing Mode, *TLP Pro* supports the complementary processes of authoring, tutoring and learning.

Authors use *TLP Pro* and its language learning templates for the fast and cost-effective creation of multimedia language learning packages for any language using the Roman alphabet. These packages can be of different types including resource corpora (e.g., sets of dialogue situations or text collections), reference and practice materials (e.g., a pedagogical grammar), or pedagogically designed courses (e.g., Business English).

Tutors use *TLP Pro* either to adapt and customise existing TLP language courses to the specific needs of their learners or to create their own course components. In this process, they may reuse TLP resources available on a LAN or Intra/Internet server, or they may draw on their own TLP contents. The software can also be used for a “multimedia re-versioning” of existing learning materials available as books, audio cassettes, or videos.

Learners use *TLP Pro* (or the *TLP Viewer*) for autonomous self-study learning, preferably embedded in a classroom and/or tele-tutoring environment. TLP learning materials can be made available on CD-ROM and/or on a LAN or Intra/Internet server. In the Editing Mode of *TLP Pro*, learners can also produce their own multimedia materials in contexts of explorative learning.

3.2. *TLP learning mode*

In the Learning Mode of a TLP package, learners can work with all learning materials and assignments contained in this package. Depending on the multimedia templates and contents used, this may include video-, dialogue- and text-based comprehension and production tasks as well as lexical, grammatical and cultural explanations and exercises.

The multimedia templates currently available in *Telos Language Partner* will now be briefly described from a learner’s perspective.

A *video template* is used for playing video clips, which may be supported by transcripts, translations and lexical look-up.

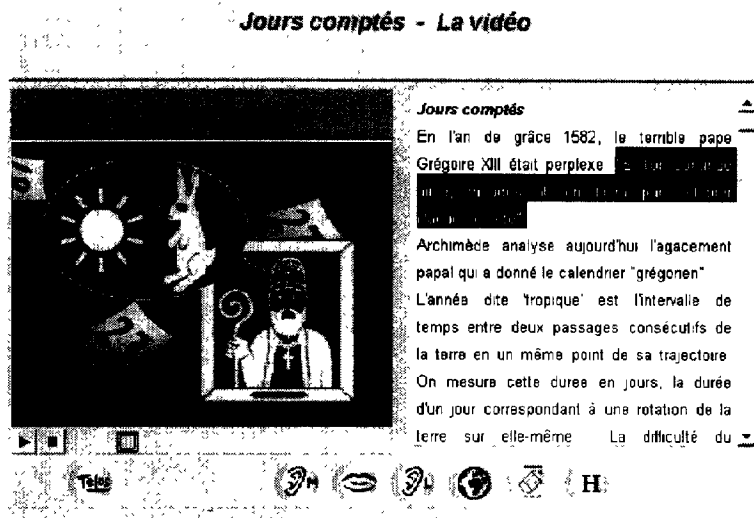
Two *dialogue templates*, one with head pictures and another one with a situation picture, support a flexible combination of listening, speaking, reading and writing exercises.

Various *text templates* are available for listening and reading comprehension, oral and written production (e.g., writing or translating letters and reports), answering questions, or describing pictures.

Gap-fill and *drag&drop templates* support a range of classical exercises (with or without sound) from filling in gaps in sentences and texts (“cloze”) to transformation and sentence production from given elements.

Explanation templates are available with or without picture and sound support; they are used for lexical, grammatical, pragmatic or cultural contents.

Jours comptés - La vidéo



Jours comptés

En l'an de grâce 1582, le terrible pape Grégoire XIII était perplexe

Archimède analyse aujourd'hui l'agacement papal qui a donné le calendrier "grégorien"

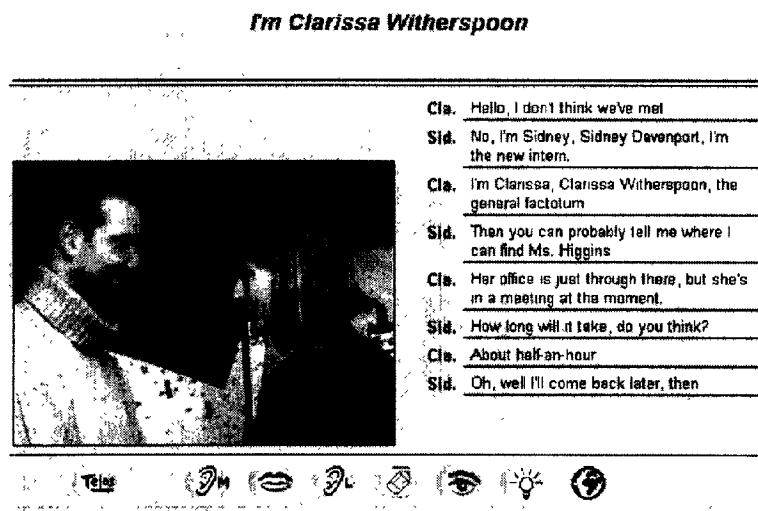
L'année dite "tropicque" est l'intervalle de temps entre deux passages consécutifs de la terre en un même point de sa trajectoire

On mesure cette durée en jours, la durée d'un jour correspondant à une rotation de la terre sur elle-même

La difficulté du

Fig. 1. Video practice.

I'm Clarissa Witherspoon



Cla. Hello, I don't think we've met

Sid. No, I'm Sidney, Sidney Devonport, I'm the new intern.

Cla. I'm Clarissa, Clarissa Witherspoon, the general factotum

Sid. Then you can probably tell me where I can find Ms. Higgins

Cla. Her office is just through there, but she's in a meeting at the moment.

Sid. How long will it take, do you think?

Cla. About half-an-hour

Sid. Oh, well I'll come back later, then

Fig. 2. Dialogue practice (with situation picture).

To ensure comprehensibility, learners may be given access to a *translation* (in video, dialogue and text exercises) and/or to an internal *dictionary* (throughout a package).

Hyperlinks are used to support swift navigation moves, e.g., from a video clip to a corresponding cloze test or from dialogue transcripts to grammatical explanations.

So far, facilities for automatic feedback have not been integrated. Learners are encouraged instead to compare their spoken and written production with a *model solution*. Exercises can also be presented as test tasks, in which case solutions are not accessible.

At the end of a session, all *learner data* (sound recordings and texts) can be saved as a separate file and sent to a tutor for correction and feedback.

Listen to your answering machine!

Back

Train Connections

- + Intercity to Manchester
- + Regional Express to Scunthorpe

Hello Mr Lattimer. I'm calling to give you the travel information for our meeting in Scunthorpe. The meeting will start at 5 p.m. You should therefore arrive in Scunthorpe at about 4 p.m. The best thing would be for you to take the Intercity to Manchester, leaving at 12.19 p.m. You change in Manchester and take the regional express to Scunthorpe. The train leaves Manchester at 2.50 and you are due to arrive in Scunthorpe at 3.45. I am looking forward to our meeting and I wish you a pleasant journey.

Fig. 3. Text comprehension exercise.

Exercice 2 - Ecoutez et complétez

Back

Écoutez et complétez les blancs

En l'an de grâce 1582, _____ Grégoire XIII était perplexé. "Si l'on continue ainsi, maugréait-il, on _____ par _____ Pâques en _____".

Archimède analyse aujourd'hui l' _____ papal qui a donné le _____ "grégonien".

L'année dite "tropicque" est l' _____ de temps entre deux passages _____ de la terre en un même point de sa _____. On mesure cette _____ en jours, la _____ correspondant à une _____ de la terre sur elle-même. La difficulté du calendrier est que l'on ne peut avoir une portion de _____ en plus ou en moins à la fin de l' _____.

Fig. 4. Gap-fill exercise (with sound).

3.3. TLP editing mode

All learning materials created with *TLP Pro* are organised and stored as TLP learning packages. Unless they are locked by a password, these packages are open for further changes and extensions and can thus be pedagogically adapted and customised to the needs of individual learner groups.

TLP packages are created and adapted in the Editing Mode of *TLP Pro*. In this mode, which is activated from the menu, the user interface is only slightly different from the one in the Learning Mode. This has the important advantage that learning contents can be changed or added in a WYSIWYG fashion: the adaptation and creation of TLP packages does not require any specialised programming expertise.

TLP Pro has been designed in such a way that the Learning Mode and the Editing Mode are two sides of the same coin. *TLP Pro* thus supports a model of multimedia language learning in which the two

Exercice 1 - Complétez

Back

En l'an de _____ 1582, le terrible _____ Grégoire XIII était _____ "Si l'on continue ainsi, maugréant-il, on _____ par _____ Pâques en _____" Archimède analyse aujourd'hui l'_____ papal qui a donné le _____ "grégorien" L'année dite "tropicque" est l'_____ de temps entre deux passages _____ de la terre en un même point de sa _____. On mesure cette _____ en jours, la durée d'un jour _____ à une _____ de la terre sur elle-même	agacement consécutifs calendrier finira célébrer été trajectoire durée pape intervalle grâce perplexe correspondant rotation
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→
↻
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Fig. 5. Drag&drop exercise (without sound).

Ja-Nein-Fragen

Gehen Sie auch zu der ÜBUNG.

Ja-Nein-Frage

Macht das einen Unterschied?

JA-NEIN-FRAGEN (Entscheidungsfragen)
sind Fragen, die sich mit "ja" oder "nein" beantworten lassen.

Frage: Hast du morgen Zeit?
 Positive Antwort: Ja.
 Negative Antwort: Nein, ich habe keine Zeit.

JA-NEIN-FRAGEN beginnen mit dem Verbe:

Kannst du ...?
 Ist ...?
 Bist du ...?
 Hast du ...?

←
→
↻
✎
✓
💡
📅

Fig. 6. Grammatical explanation.

fundamental dimensions of content processing – content “writing” and content “reading” – are integrated in one unified approach.

The main difference between the two modes is that in the Editing Mode the TLP templates are ‘unlocked’ with the effect that all text, sound, picture and video content can now be modified through direct insertions of data into the template. A dialogue exercise, for example, can be adapted by changing the situation picture, the dialogue text, the sound, or the translation. The empty dialogue template can be used to create new dialogues.

This template-based editing facility, which enables the adaptation of existing and the creation of new multimedia language learning packages, is available for all TLP templates.

An additional feature concerns the important difference between practice and testing, which is a difference in purpose rather than in content or type of activity: whereas practice is more profitable with solutions, testing clearly excludes them. To account for this difference, the Editing Mode provides a fa-

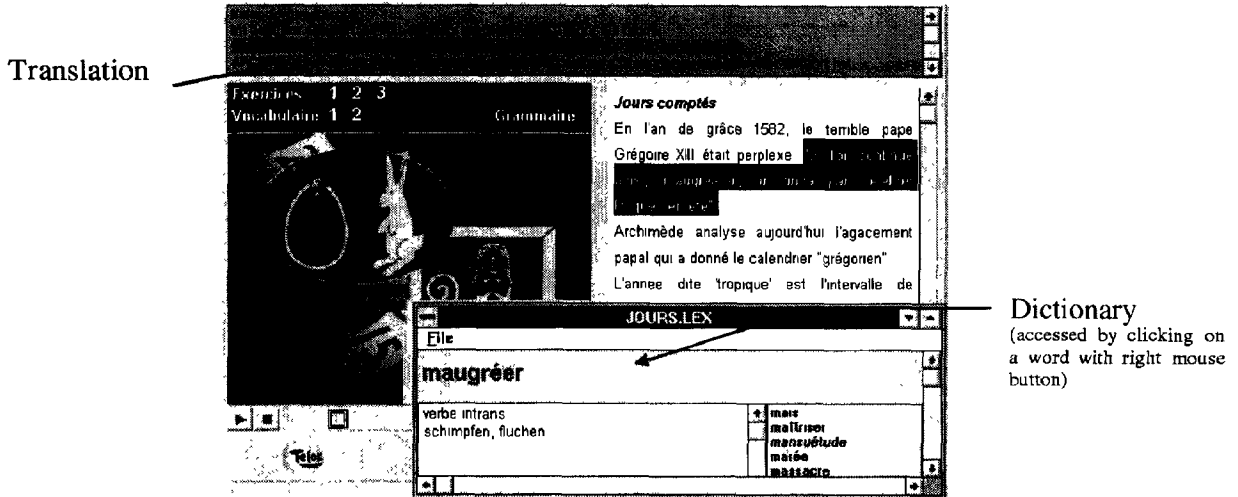


Fig. 7. Video practice with translation and dictionary.

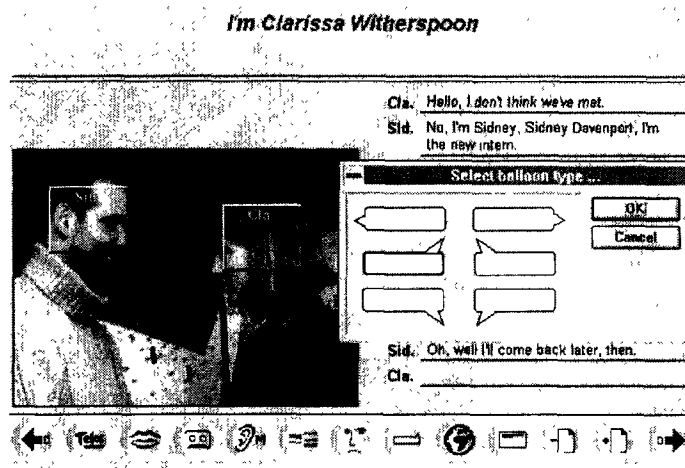


Fig. 8. Dialogue exercise in the editing mode.

cility whereby exercises can be made available (in the Learning Mode) either in *Practice Format* (with access to solutions) or in *Test Format* (without access to solutions). It is thus possible to create exercises with solutions and to make them available for practice or testing purposes, i.e. with or without solutions, depending on needs.

Also available in the Editing Mode is an *import function*, which greatly facilitates the creation of new learning packages. The import function makes it possible to re-use existing TLP resource packages, learning modules or course materials. Individual materials (e.g., dialogues or grammatical exercises) can be selected and then copied to the new package and adapted to the needs of a specific learner group.

Hyperlinks are used to create navigation paths; these can exist within packages, e.g., between communicative video practice and cultural explanations, or between packages, e.g., a dialogue package and a pedagogical grammar package. The Editing Mode also provides a facility to create internal *dictio-*

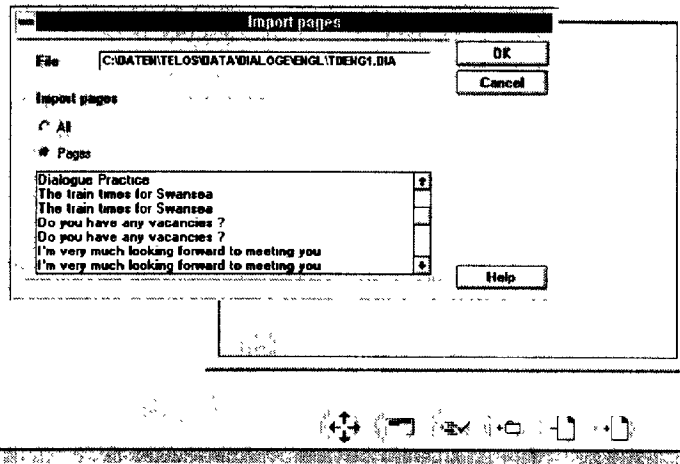


Fig. 9. Import exercises from resource package.

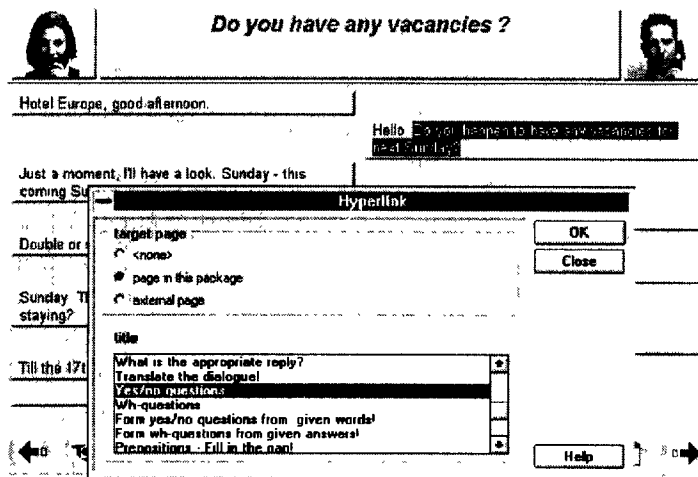


Fig. 10. Create hyperlinks from dialogue text to grammatical explanation.

naries as separate modules, e.g., English-German for beginners, and to link them to individual learning packages as required.

Tutors can use the Editing Mode of *TLP Pro* to create and customise learning and testing packages that meet the specific needs of their target learner groups. Two basic procedures can be flexibly combined: parts of the multimedia content of a new TLP package can be created from scratch; other parts can be imported and further adapted from already existing TLP packages. The imported materials can be taken from any TLP package containing relevant course materials or open resources (see below) that is not locked by a password and is available either on the hard disk or on external storage media (diskette or CD-ROM).

In this way, it is possible, for example, to select a number of dialogue situations (e.g., telephoning) from resource package A and combine them with grammatical explanations and exercises from resource package B. If necessary, additional dialogue variants and cultural notes can be created and integrated.

Appropriate hyperlinks, both within the new package and to other packages, as well as a dictionary link help to support the overall coherence and accessibility of the material.

To sum up, tutors can use the Editing Mode of *TLP Pro* to create and customise learning packages that meet the specific needs of their individual learner groups. The Editing Mode can also be used, however, by learners to explore communicative situations and to create their own exercises and dictionaries.

3.4. *Delivery*

To facilitate a flexible integration of on-line and off-line modes of delivery and learning depending on learning preferences or access restrictions, *Telos Language Partner* supports a hybrid delivery strategy. Both the TLP Pro software and TLP learning packages can be used on stand-alone PCs as well as in a Windows NT-LAN, an Intranet, or in the Internet.

In the Internet, the actual learning activities are off-line; this ensures adequate multimedia handling and interactivity. Learners download learning modules and add-on materials of appropriate size from the Internet server. Then they work with the material at their own pace on their home or office PC sending back their test results and learning products (e.g., via email) for tutor evaluation and feedback as required. Larger quantities of multimedia contents (in particular those involving video clips) can be delivered on CD-ROM and integrated with downloaded modules.

4. TLP multimedia contents

Telos Language Partner Pro is an easy to use software for the production and customisation of multimedia language learning materials. Few tutors, however, will have the time (or competence) to create ALL their learning materials themselves. Time and cost effective multimedia production and customisation will thus crucially depend on access to reusable multimedia contents compatible with *TLP Pro*.

For this reason and as part of an exploitation initiative resulting from the “Telos” project, *TLP Pro* is currently used to produce multimedia learning packages for a variety of language learning needs in different educational environments – university, school, adult education and corporate training. Three types of learning contents are available:

1. *TLP Dialogue Packages*. These packages cover some 75 standard situations of everyday life in English, French and German. Topics include “Travelling”; “Meeting People”; “Theatre, Shopping, and Medical Appointment”. Each situation contains a dialogue exercise involving reading, writing, listening and speaking as well as corresponding gap-fill exercises. Comprehension is supported by a translation and an internal dictionary. Level: intermediate; language of instruction: target language.
2. *TLP Language Courses*. This includes two general courses (with 10 units each) covering travel situations in French (“Rencontre à Strasbourg”) and English (“Dublin Encounters”) as well as a Business English course on telephoning, socialising, meetings and presentations (12 units). A course unit typically contains dialogue exercises involving reading, writing, listening and speaking as well as corresponding phraseological and grammatical explanations and exercises. Each course can be used for self-study or (preferably) in connection with classroom teaching and tele-tutoring. Level: false beginner (French) and lower intermediate (English). For the two general courses the language of instruction is German; for the Business English course it is English.
3. *TLP Video Lingua Modules*. The modules are based on authentic video clips from the ARTE TV magazine “Archimède”. Emphasis is on general scientific and technical topics like the history of

the calendar, the perception of colours, or the functioning of a refrigerator. When watching a video clip, learners have access to a transcript, a translation and an internal dictionary. Comprehension and production tasks help to explore the video content; grammatical and lexical explanations and exercises are integrated via hyperlinks. Initially, these modules will be developed for French and German; transfer to other languages is in preparation. Level: intermediate and advanced; language of instruction: target language.

In the learning mode of *TLP Pro*, these multimedia contents are suitable for autonomous self-study in an open access approach; they can also be organised in a structured course programme. In both cases, learner activities may be embedded in a classroom or tele-tutoring environment.

In the editing mode of *TLP Pro*, the materials can be easily adapted to individual learner needs. They may also be used as a resource pool for more extensive customisation activities. For instance, tutors can select and extract individual exercises and combine them with additional exercises of their own to create new personalised learning packages. Through the additional integration of authentic contents from the immediate work environment (e.g., training videos) or the Internet, the vision of work and culture embedded language learning becomes an immediate reality.