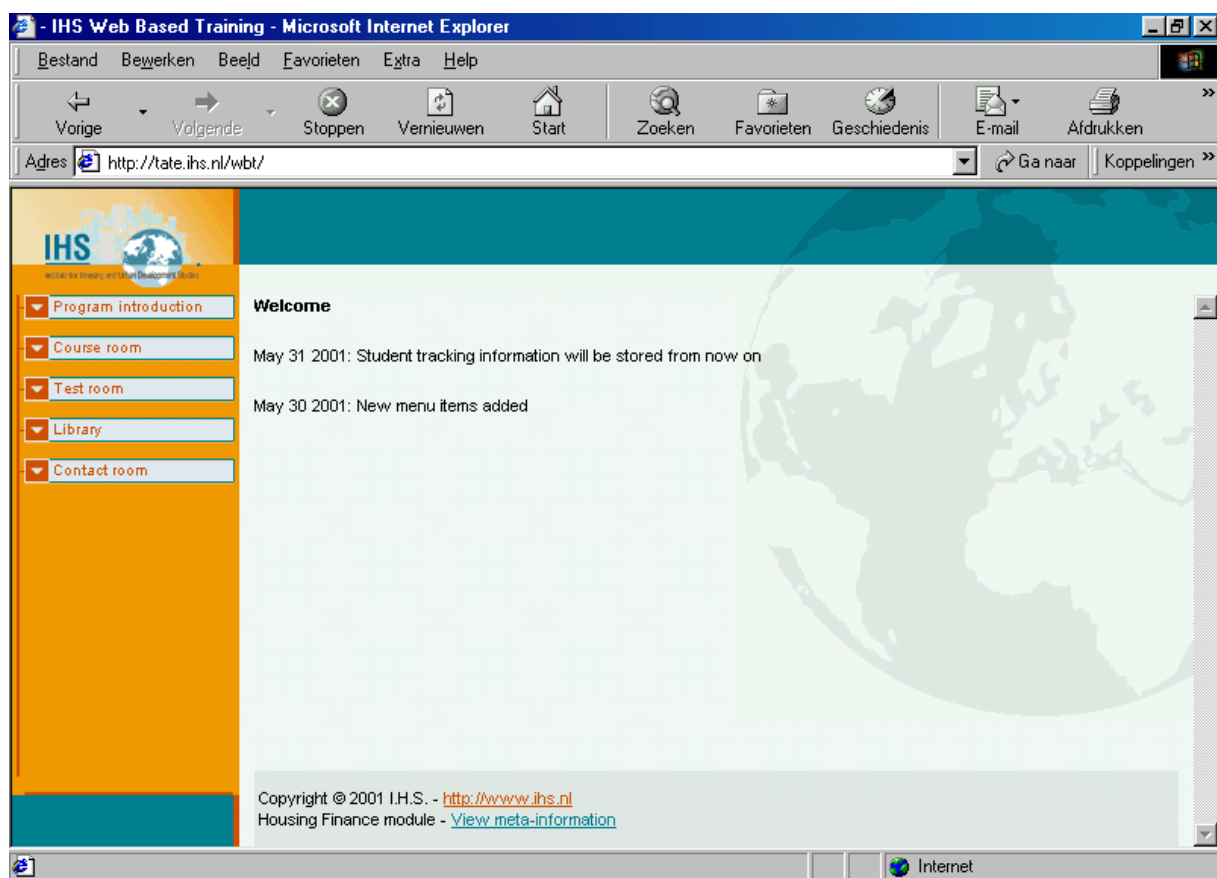




The Role of the IHS Library in Supporting a Distance Learning Programme :

A Practical Assignment based on the Experience of the Institute for Housing and Urban Development Studies (IHS)



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Executive Summary

This report is the final activity for the Integral Document Management (IDM) post-graduate course, and describes a practical assignment on what happened during a pilot project on distance learning at the Institute for Housing and Urban Development Studies (IHS). The focus is on the future tasks and activities that the IHS library should develop in the context of the wider implementation of distance learning within the institute. Apart from providing general background on the IHS, the report describes a pilot project on Housing Finance. It then looks ahead to the kind of support that the IHS library might need to establish for the institute's Technology-Assisted Training and Education (TATE) Programme, a longer term distance learning initiative. The conclusions and recommendations relate to the IHS in general, to the Housing Finance pilot project, to the TATE Programme, and they reflect upon the ramifications for the support to be offered by the IHS library. The report ends with a short final conclusion that points towards the priority actions that need to be undertaken to enable the IHS library to be able to fully support distance learning throughout the institute.



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Abbreviations

ACRL	Association of College and Research Libraries
FTE	Full-Time Equivalent
ICT	Information and Communication Technologies
ICHUD	International Course on Housing and Urban Development
IDM	Integral Document Management
IHS	Institute for Housing and Urban Development Studies
LCMS	Learning Content Management System
LMS	Learning Management System
MA	Master of Arts
MSc	Master of Science
OPAC	Online Public Access Catalogue
PhD	Doctor of Philosophy
TATE	Technology-Assisted Training and Education Programme
UMC	Urban Management Course
VROM	Ministry of Housing and Spatial Planning
WBT	Web Based Training

Chapter 1: Introduction

Many organisations in the higher educational sector have spent a lot of time and energy in recent years to develop distance learning or distance education programmes to enable their institutes to compete in the international higher education market. The Institute for Housing and Urban Development Studies (IHS) is no exception to this trend. At the end of last year, IHS launched a distance learning pilot project on Housing Finance. This pilot project was established to explore first hand, both the organisational inputs and the technical investments that would be required during the implementation of a distance learning programme at the IHS.

Topic

The Head of the IHS Library (the author) was also a member of the project team involved in the Housing Finance distance learning pilot project. This report aims to describe what happened during the pilot project, paying particular attention to defining the library's (potential) role in the planned distance learning programme of the IHS, called the Technology-Assisted Training and Education (TATE) Programme. The main issue being:

What would be the functions and tasks of the IHS library in the context of organisation's proposed distance learning programme(s)?

Report Structure

After an introduction, this report has the following structure:

- Chapter 2 provides background on the IHS and its current educational programmes;
- Chapter 3 describes the Housing Finance pilot project;
- Chapter 4 discusses the general role of libraries in distance learning programmes and the contribution of the IHS library to the Housing Finance Distance Learning pilot project in particular;
- Chapter 5 explores the directions the IHS library might consider pursuing in order to facilitate the implementation of distance learning within the organisation;
- Chapter 6 provides a brief overview of the main copyright issues relating to distance learning in the context of IHS's plans, and
- The final chapter ends with some conclusions that have been drawn from the experiences gained and gives some general recommendations for the organisation to consider, together with some specific recommendations for the IHS library.

Omissions

Three aspects included in the original tentative proposal have been left out as their scope was considered by the author to be too wide for the purposes of the assignment.

1. Learning Management System (LMS)

As a decision was made at the very beginning of the pilot project not to opt for a particular Learning Management System (LMS), the author felt that the idea of undertaking a comparison of the various LMS packages would be premature at this stage. Recent

publications in the popular scientific magazines, cited below would seem to confirm that such a comparison of LMSs might be premature at this stage.

Electronic learning platforms like WebCT and Blackboard have led to the creation of a whole new computerised layer into the academic process that allows faculty to easily create at least online administrative structure for their courses, including varying levels of content from traditional publishers (Lichtenberg 2001)

Another commentator has observed that LMSs (server based software that controls e-learning and needs and uses) are going through an uncertain phase. LMS standards are in flux, vendors may be facing a shakeout, and relatively few large companies to date have embraced enterprise-wide e-learning. The development of LMS market has been further hampered by a lack of standards. The same author predicts that final LMS standards may take a year or two to evolve, without there being a guarantee of any possible plug-and-play compatibility among systems. (Alexander 2001, p. 59) Alexander also indicated that the costs of LMS systems have gone up fivefold in the past four years, with prices varying from US\$ 20,000 to over US\$ 300,000.

Learning Content Management System (LCMS)

He also describes a next-generation LMS in development (Learning Content Management System (LCMS)), that will at the same time enhance both functionality and buyer confusion. Apart from delivering training, it would catalogue reusable segments of learning material, permitting segments to be mixed and matched to tailor learning for different audiences. (Alexander 2001, p. 60) Another author describes it as:

“(...) a complex piece of software that labels learning objects (PowerPoint slides, video clips, illustrations, quiz questions, even course modules) then organises and delivers them in infinite combinations.” (Jones 2001, p. 1)

Jones goes on to argue that LMSs and LCMSs in fact have very different functions. The former make the process of scheduling classes, creating catalogues and registering learners more efficient, while LCMS on the other hand, are only about delivery. He expresses the difference between the two systems in the following way:

“(...) the LMS helps get you to the classroom door and the LCMS manages the experience inside the classroom.” (Jones 2001, p. 2)

Although most LMSs can do some content management and most LCMSs do have some classroom management capabilities, the feeling is that neither can do it all, but they rather do one or the other well. This may change in the future, but the current advice is to either incorporate both systems into an organisation's e-learning strategies or to decide which one is most important to the organisation. Jones describes a content rich commercial organisation that needed to have its existing content converted and managed. A LCMS allowed them to reuse core online content in a tailored fashion for different clients. (Jones 2001, p. 2)

The Housing Finance pilot project team took the decision to deliver distance learning based on technology that had already been developed by Atos Origin. Even so, IHS will still need to take a decision on which LMS (or maybe LCMS) it wishes to adopt during the

implementation of the distance learning programme within the institute. This decision should be based on a separate study. It is, therefore, not within the scope of this report.

2. Relational Databases

Another point that has also been dropped from the practical assignment is that of looking for examples of the use of relational databases in distance learning programmes. Again it was felt although it was something that might need to be looked into in the future, this issue in fact provided little immediate information that would have been of short-term relevance to the setting up of the proposed distance learning programme at the IHS.

3. Urban Knowledge Platform

An Urban Knowledge Platform, a virtual community of interest on urban issues currently under development at IHS, may be able to provide important linkages for the Technology-Assisted Training and Education (TATE) Programme. However, it was felt that it is now too early in the development of this Knowledge Platform to make any realistic predictions about possible synergies.

Original (tentative) Proposals

For the sake of clarity both initial tentative project proposals compiled by the author at the end of last year and at the beginning of this year are included in Appendix A.

Chapter 2: The IHS Context for Distance Learning

The IHS describes itself on its web page as follows:

“IHS, or the Institute for Housing and Urban Development Studies, is an international education institute aiming at strengthening local capacities in housing, urban management and urban environmental management, with the overall objective to improve urban quality and reduce urban poverty. Each year, more than 150 professionals from all over the world come to Rotterdam to take part in one of our Diploma courses, Master Degree Programmes or to do a PhD study. Besides developing and conducting training and education programmes in the Netherlands, IHS is engaged in various advisory and technical assistance projects abroad, for clients like the World Bank, Asian Development Bank, United Nations and the European Union.” (<http://www.ihs.nl/institute/institute.html>)

The IHS was established in 1958. The institute is an independent foundation which offers international post-graduate education (MSc, MA, PhD), training research and advisory services in the Netherlands, Asia, Africa, Latin America and Central and Eastern Europe in the fields of Urban Management, Urban Environment and Housing. Over the years, more than 4500 urban professionals from over 100 countries have participated in IHS Master's degree programmes, post-graduate diploma courses and its PhD programmes. IHS' Master's and PhD programmes are set up in conjunction with well-known European universities, as well as an American university.

The institute employs an international staff of around 50 experts: economists, planners, engineers, architects, sociologists, geographers and educationalists. These experts are assigned to training, advisory technical assistance and research in the Netherlands and abroad. The institute has over 20 support staff based in Rotterdam, including four library staff (2.4 Full-Time Equivalent (FTE)). In addition, there are 15 staff members working for IHS in Asia, Africa, Eastern Europe, Latin America and the Middle East. IHS maintains active contact with other urban development research and development institutions all over the world.

Education Programme in 2002

IHS training ranges from short executive courses lasting 3½ weeks to degree courses of 17 months duration.

Short-term post-graduate courses include:

- Three-months courses
- 3½-weeks executive courses
- Industrial Environmental Management (6 weeks)
- Environmental Health and Hazardous Waste Management (3 weeks)
- Industrial Pollution Control and Management (3 weeks)
- Sustainable Building and Urban Design (8 weeks)
- Executive Summer Course of Inner City Revitalisation (2 weeks)

The Master's Programmes include:

- MA Urban Management
- MSc Urban Environmental Management
- MA Environmental Change Management
- MSc Urban Housing Management
- MSc Housing and Inner City Revitalisation

Other training activities include tailor-made courses, refresher courses and PhD research.
(*Educational programme 2002 2001*)

The educational programme of IHS in 2002 includes the following courses:

Course Type	Name of Course	Duration of Course
Short Courses (3 months)		Starting on:
	Municipal Environmental Policies and Local Agenda 21	16 January 2002
	Capacity Building and Training for Urban Development	16 January 2002
	Managing Sustainable Livelihood and Poverty Reduction Programmes	16 January 2002
	Managing Urban Infrastructure Services	17 April 2002
	Urban Management: Planning and Finance	17 April 2002
	Good Urban Governance and Public Management	17 April 2002
	Real Estate and Project Management	17 April 2002
	Inner City Revitalisation and Urban Heritage	17 April 2002
Short Courses (3½ weeks)		
	Innovation in Urban Policy and Management	14 January 2002 and again on 15 April 2002
	Capacity Building and Training of Trainers	14 January 2002
	Local Policies for Sustainable Livelihood Programmes	14 January 2002
	Management and Implementation of Informal Settlement Regularisation	14 January 2002
	Housing Policy and Finance	14 January 2002
	Participative Planning – Action and Strategic Planning	11 February 2002 and again on 13 May 2002
	Public Management for Development and Change	11 February 2002 and again on 13 May 2002

	Urban Municipal Finance	11 February 2002 and again on 13 May 2002
	Local Economic Development	11 February 2002
	Municipal Environmental Management : Policy Options and Tools	11 February 2002
	Advanced Strategic Planning	11 March 2002 and again on 10 June 2002
	Successful Urban Partnerships – Public/Private and Public/NGO	11 March 2002 and again on 10 June 2002
	Advanced Public Management	11 March 2002 and again on 10 June 2002
	Advanced Urban Finance	11 March 2002 and again on 10 June 2002
	Local Agenda 21 : Processes and Participation	11 March 2002
(three-week course)	Managing Urban Development in an Era of Aids	15 April 2002
	Urban Infrastructure : Operations Management	13 May 2002
	Urban Infrastructure and the Market : Finance and Organisation	10 June 2002
	Land Use Management	10 June 2002
	Decentralised Housing Provision	10 June 2002
Other Short Courses		
(two-week course)	Executive Summer Course on Inner City Revitalisation	17 July 2002
(six-week course)	Industrial Environmental Management	11 September 2002
(three-week course)	Industrial Pollution Control and Management	11 September 2002
(eight-week course)	Sustainable Building and Urban Design	18 September 2002
(three-week course)	Environmental Health and Hazardous Waste Management	2 October 2002
Master Courses		
(16-month course in collaboration with the Erasmus University)	MA in Urban Management	September 2002

Rotterdam)		
(17-month course in collaboration with Wageningen University)	MSc in Urban Environmental Management	September 2002
(12-month course in collaboration with the Erasmus University Rotterdam)	MA in Environmental Change Management	September 2002
(16-month course in collaboration with Lund University, Sweden)	MSc in Urban Housing Management	September 2002
(16-month course in collaboration with the University of Delaware)	MSc in Housing and Inner City Revitalisation	September 2002
Other Courses		
	Tailor-made Courses	Upon request
(2-3 weeks)	Refresher Courses	(usually through a local IHS Alumni organisation)
	PhD Research Programme	

Table 2.1 IHS Educational Programme 2002

The lecturers for these courses usually compile for each subject Readers/Course Packs that are copied and handed out to the students. A copy of each Reader is also passed on to the IHS library. There are no electronic versions of these readers that generally consist of photocopies of journal articles, chapters from books and/or lecture notes/exercises.

These courses have been described in the following terms:

“(...) the training and educational activities of the Institute in Rotterdam can be divided in 2 distinct categories; (i) short courses and (ii) masters’ courses. The short courses comprise: a. regular short courses (usually 3 months in duration) on “classic” topics within the Institute’s area of expertise; b. tailor-made courses (courses put together on specific, topic-related requests) and refresher courses. The masters’ courses are 16-18 months in duration and are given in collaboration with universities and/or other institutes for international education. All courses are currently given using proven, rather classic, interactive face-to-face teaching methods (i.e., classroom lecturing, group workshops, group field trips, etc.).” (Renswoude 2000, p. 1)

Strategic Importance of Distance Learning

Against the background of diminishing opportunities for overseas students to finance expensive traditional courses given in Rotterdam, the IHS has been looking for innovative ways to increase the institute’s outreach in the global educational market. As was observed in a document submitted to the Ministry of Foreign Affairs:

“(...) the global market for IHS’ educational products is probably much larger than what is currently seen translated into numbers of students actually participating in the Institute’s training and educational activities in Rotterdam.” (Renswoude 2000, p. 1)

Technology-Assisted Training and Education (TATE) Programme

The Technology-Assisted Training and Education (TATE) Programme aims to bring about a process whereby the traditional IHS training and education activities are made available in a format that allows them to be taught as part of a comprehensive distance learning package to IHS's overseas students. The full text of the original TATE proposal is given in Annex B.

Tool for Change Management

Research by Khapova considered the positioning of the TATE programme within the IHS from the perspective of it being a tool for change management. (Khapova 2001) Her analysis did not go into detail on how to transform existing content into a distance learning format, although she did concede that information would have to be presented briefly and clearly, but be full content wise. (Khapova 2001, p. 52) It is here that Khapova may have underestimated the size of the task ahead. One of the assumptions of this paper is that at present the delivery of distance learning cannot be limited just to the module itself, but additional information support will be essential, be it in a traditional (printed) or electronic format. This is a support role that the IHS could contribute to, but it may also require the development of new skills for the IHS content and support staff. This would be particularly true in the area of preparing Readers/Course Packs not only in print format, but *standard*, in an electronic format, to facilitate use in the distance learning environment. More will be said on this later in this report.

Pilot Project on Housing Finance

One of the assumptions of the TATE programme proposal is that the IHS already has the technology and skills to implement a distance learning programme. In order to facilitate that, it was decided to initiate a pilot project on Housing Finance. This report describes the activities of that pilot project and its ramifications for the library in particular, and for the IHS as a whole. The module Housing Finance in a Web Based Training (WBT) format is the first module designed under the TATE Programme. The module is based on existing content used as delivered in a classroom context at IHS. However, it has been adapted and revised for the on-line learning environment. The next chapter of this report will describe the Housing Finance pilot project.

Chapter 3: Housing Finance Pilot Project

The TATE programme draws on special innovation subsidies from the Dutch Ministries of VROM and Foreign Affairs (Development Co-operation). The programme started in early 2001 and has a projected duration of two years. One of the first products of the TATE Programme is the WBT module on Housing Finance, specifically supported by the Ministry of VROM. It was developed by a team of experts from the IHS, the Ministry of VROM and Atos Origin, an international private company specialising in electronic communication and business.

The topic of Housing Finance was chosen because there was more than just a Reader/Course Pack available. The involved IHS teaching staff had already drawn up guidelines (for students). (Baharoglu and Lindfield 2000) These guidelines were designed as training material offering basic systems and analytical tools to identify the (housing finance) system to be used in a particular context. The guidelines also included a selected bibliography (based mainly on the Reader/Course Pack).

The place of Housing Finance at IHS

The Housing Finance module is presently being taught in two Master Courses (Urban Housing Management that started in September 2001 in the Housing and Inner City Revitalisation Master Programme) as well as in several short IHS training courses.

Aim of the Project

According to the Project Handbook drawn up by the Project Manager the main objective of the Housing Finance pilot project was formulated as follows:

“The deliverable aimed for will be a Web Based Training module called Housing Finance. This module will be based on an existing, mostly paper based IHS module Housing Finance. Due to financial constraints the most important starting-point of the project is that the technical and graphical development of the WBT version of Housing Finance will be based on one of Origin’s formerly developed e-learning modules. Another important delivery will be the evaluation report after a period of extensive testing and the implementation of the WBT module in the IHS technical infrastructure.” (Verhalle 2001, p. 6)

Project Organisation

The project had a Steering Committee consisting of a representative from the IHS (Deputy Director), a representative from VROM (the financiers of the project) and a representative from Atos Origin (senior manager). Once the project handbook had been approved by the Steering Committee, the project team, that was responsible for the execution of the project, received a copy. The project team had the following team members:

Project Members	Parent Organisation
Project Manager	Atos Origin
Instructional Designer	Atos Origin

Operational Co-ordinator	IHS
Content Experts	IHS
Editor Cultural Issues	IHS
Technical Specialist	Atos Origin
Technical Specialist	IHS
Graphic Composer [Designer]	Atos Origin
Team Member	VROM
Team Member	IHS library

Table 3.1 Composition of the Housing Finance (pilot project) project team

The Project Handbook as compiled by the project manager did not define specific roles for either the VROM team member or the IHS library team member. The VROM team member was present to represent the interests of the financier of the pilot project. The library team member used the project to find out what tasks and responsibilities the IHS library might need to develop in order to support the proposed IHS distance learning programme (the subject of this report). The Project Manager was the only member of the project team who met with the project Steering Committee. Project team meeting dates are given in the table below along with significant milestones/events in the project and an indication of the timing of the main project phases.

Date of Project Team Meeting	Milestones/Events in the Project	Project Phases
1 December 2000: a. Kick Off Meeting	- Official Start of the Pilot Project (all interested parties attended)	(Phase 0 Preparation)
20 December 2000: 1 st Project Team Meeting	- Project Handbook in preparation (Project Manager)	(Phase 1 Analysis)
10 January 2001: 2 nd Project Team Meeting	- Project Handbook approved by Steering Committee	
24 January 2001: 3 rd Project Team Meeting	- Report on IHS Technical Infrastructure completed by IT department of IHS - General Educational Analysis completed	
7 February 2001: 4 th Project Team Meeting		(Phase 2 Design)
21 March 2001: 5 th Project Team Meeting	- IHS Operational Co-ordinator left IHS as of 1 April	
4 April 2001: 6 th Project Team Meeting	- Instructional Design Completed - Atos Origin Project Manager Replaced	
18 April 2001: 7 th Project Team Meeting	- IHS (primary) Housing Finance Content Expert left IHS as of 1 May	(Phase 3 Realisation)
9 May 2001: 8 th Project Team Meeting		
16 May 2001: 9 th Project Team Meeting		
30 May 2001: 10 th Project	- Pilot Test 28 May – 8 June 2001	(Phase 4 Test and

Team Meeting		Acceptance)
13 June 2001: Project Team (Preliminary) Evaluation	- Final pilot project evaluation report (awaited)	(Phase 5 Evaluation)

Table 3.2 Housing Finance (pilot project) project team meetings, milestones/events and phases

Technical Requirements

The graphical and technical design of the WBT and the LMS it was assumed should be based on a so-called “low” configuration:

- Processor: P166 MMX
- Internal memory: 16MB (32MB recommended)
- Video board: 2MB (maximal resolution 800x600 and 256 colours)
- Internet Explorer or Netscape Navigator, version 4.x or higher (during the pilot test the specification read Internet Explorer, version 5 or higher)
- Flash 5 plugin (not used in the pilot test)
- Win 95/98/ME/NT/2000
- Modem 28k8 or more (56k recommended) or intranet facilities with connection to the internet

Optional:

- CD-ROM player: 8x speed (16x speed recommended).
- 16 bits audio board (SoundBlaster or a compatible board).

Review of IHS Technical Infrastructure

This culminated in a short report by the head of the IHS IT department. (Santen 2001) That report concluded that the major disadvantages of the LMSs WebCT and Blackboard were that:

- It is not possible to separate the course from the content
- You cannot use your own interface for the course

IHS was interested in an LMS that was capable doing the former, to allow greater flexibility. IHS purchased a separate Windows NT server and additional devices and software. The table below, as specified in the above mentioned report, gives an overview of the initial technical infrastructure needed for implementation of distance learning at IHS.

Product	Cost	Acquired
Windows NT Server	fl 15.000,-	Yes
Windows NT workstation	fl 7.000,-	Yes
Digital video camera	fl 10.000,-	Yes
Capturecard	fl 2.000,-	Yes
Adobe Premiere	fl 125,-	Yes
Adobe Photoshop	fl 125,-	Yes
Macromedia Dreamweaver Ultradev	fl 950,-	Yes
Macromedia Flash	fl 975,-	Ordered
Microsoft SQL Server	fl 1.000,-	Ordered

Slide scanner	fl 3.000,-	Yes
Audio encoder	not known yet	-
WebCT	fl 2.500,-	Yes
Various hardware	fl 2.500,-	-

Table 3.3 Overview of hardware and software needed at IHS for the Housing Finance module

Educational Analysis and Instructional Design

From the outset of the project a considerable amount of time went into the Educational Analysis and the Instructional Design processes using content available from IHS. Indeed the majority of the project meetings were about the progress (or lack of it) of these two related activities. A complicating factor was the limited availability of IHS content experts (either through overseas missions and/or teaching obligations). This meant that it was difficult for the Educational Designer from Atos Origin to have sufficient time with the IHS content experts to discuss and develop a learning model for the module. In addition, there was a need to develop some further background material to illustrate some of the concepts under consideration. One of IHS content experts supervised a student to look for this material on the Internet. The biggest problem being that neither the Atos Origin Educational Designer nor the IHS student, were native English speakers. This situation was complicated by the abrupt departure of the main IHS content expert before all the material had been properly processed. The biggest barrier being not so much the technology involved, but the English of those assembling the content. Clearly there is a need in this project process for someone to have the final say, not only on the content side, but also on the quality of the English used. All this meant that the time allocations for the Educational Analysis and Design activities went well beyond what had originally been budgeted for.

Constraints

The following constraints has been identified from the beginning of the project:

- housing finance experts at IHS will not always be available for feedback during project team meetings
- IHS technical infrastructure (poor Internet provision that was not expected to improve in the short-term) although alternatives, such as through the Erasmus University were being investigated
- IHS has a limited server capacity (in order to run an LMS other than WebCT or Blackboard (these LMS run via an external server) new hardware needs to be purchased
- WebCT and Blackboard limit the developer to tailor the user interface of the WBT module Housing Finance (an alternative such as Lotus Learning Space 4 could be explored) (Verhalle 2001, p. 16-17)

Pilot Phase

In the pilot, not all designed functions were available. However, students who were involved in the pilot test were given the opportunity to study in an authentic web environment. Unfortunately, the "HELP function" of the distance learning module was not available during the pilot test phase. A document called "about this database" was supposed to have offered students information about each of the components (called “rooms”) of the module. Students were, however, able to seek assistance from several IHS staff members for advice on technical or content issues. Although the course started with a general introduction, this was not the envisaged navigation demo that should have been available to students. Instead a textual explanation was given, using text provided by the new IHS Operational Co-ordinator.

Set-Up

The learning environment consisted of a series of "rooms". The structure of the “course room” is given in the figure below. It can be seen in navigation frame on the left.

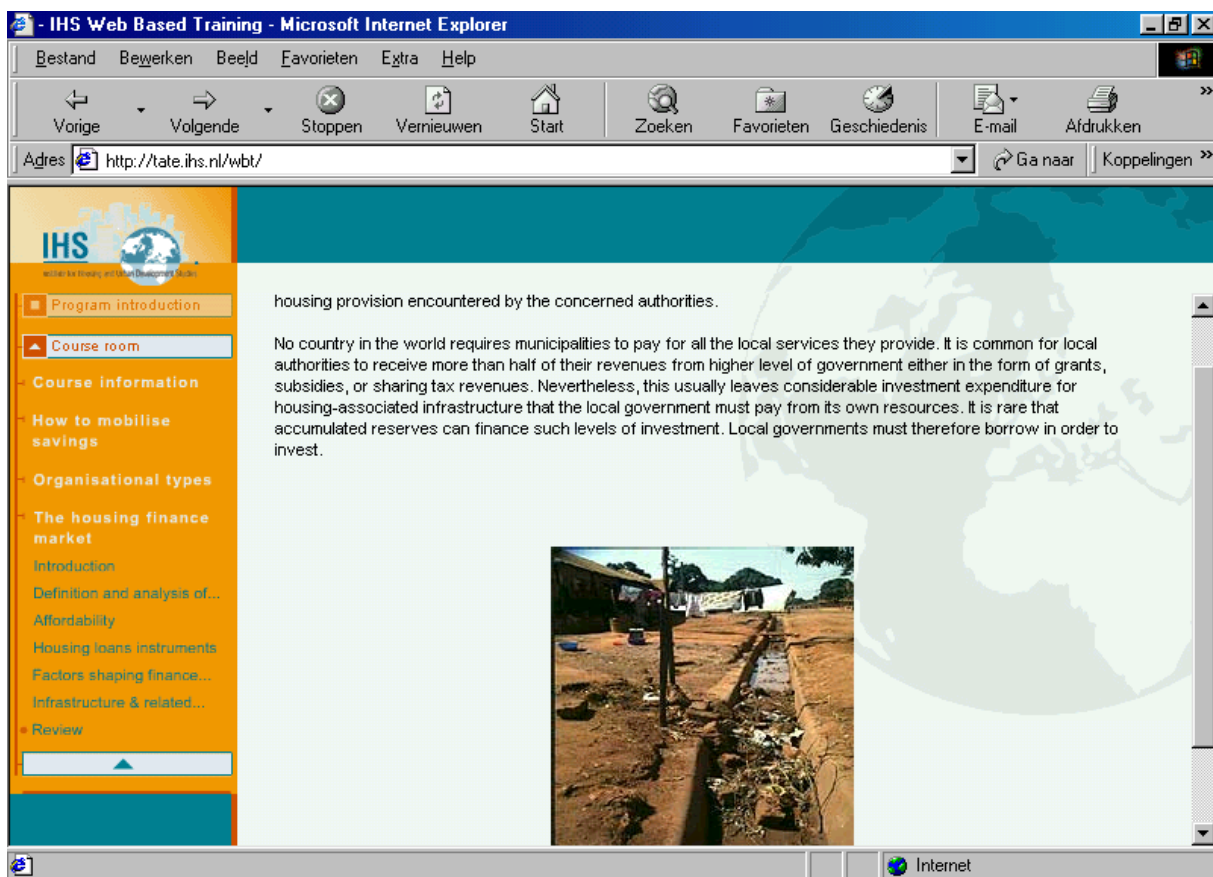


Figure 3.1 Structure of the “Course Room” in the Housing Finance Distance Learning Module

The Housing Finance module consisted of two layers of information and interaction:

- factual information provided by the course;
- exercises and tasks that students had to complete.

Aim

Housing Finance is a course that focuses on the systems of housing finance. These systems relate to many other areas of urban management such as land management, housing policy,

infrastructure planning and finance, community participation, and local economic development. The course did not address these issues in any detail, although it did describe the linkages to these areas.

Learning Objectives

After completing the module, students should be able to:

- globally describe a housing finance sector
- describe how the several models of housing finance work
- explain the structure of a housing finance system and how it relates to other areas
- identify key performance requirements for housing finance in any context, in general, and in particular in the context of their own countries
- recognise the key role of the state as the regulator as well as the enabler of the housing sector
- measure affordability and select the best type of loan in a particular situation
- make proposals for improvement to a component in order to promote an efficient housing finance system

Target group

The target group for the course was:

- middle and senior management in the financial sector;
- staff of governmental and non-governmental organisations who are involved in the preparation or the decision making of housing and urban renewal/urban development programmes,
- staff involved in project appraisals, particularly in the housing field, and
- staff involved in the development of financially feasible housing projects for urban development.

Students were expected to have a basic knowledge of computer use and Internet facilities.

It should be noted that the students who normally attend traditional IHS courses live or work in developing countries or in countries of the former Eastern Block.

Structure of the module

The main part of the course (in the “course room”) consists of three sections. The first provides an overview of the housing finance sector and describes the 'supply side' or financing institutions. The second section describes the 'demand side', particularly in respect of the various ways of raising savings for housing finance. The third section continues the description of the 'demand side' focusing on measures improving housing affordability and means of structuring loan instruments and broader financing systems to enhance affordability. Each chapter contains questions, examples and tasks and is followed by a self-assessment.

Subjects

The course addresses the following subjects:

CHAPTER I: HOW TO MOBILISE SAVINGS

- Context and structure of a housing finance system
- Key performance requirements
- Types of savings
- How to mobilise resources

After completing this chapter, students should be able to:

- Describe the context in which a housing finance system operates
- Identify key performance requirements of a housing finance system
- Identify advantages and constraints for savings
- Recognise and describe different type of savings
- Draw a basic plan for mobilising savings

CHAPTER II: ORGANIZATIONAL TYPES

- What is intermediation
- Models of intermediation
- Housing finance organisations and their mechanisms

After completing this chapter, students should be able to:

- Describe the mechanism of intermediation for each type of institution
- Explain the characteristics of each housing finance institution and model
- Explain the role of banks in housing finance
- Identify the best model of intermediation for their own country

CHAPTER III: THE HOUSING FINANCE MARKET

- Definition of the housing finance market
- Quantitative analysis
- Qualitative analysis
- The problem of affordability
- Housing loan instruments
- Factors shaping financial systems
- Infrastructure and services

After completing this chapter, students should be able to:

- Identify and describe the factors of the housing finance market
- Select the best type of loan in a given situation
- Explain the role of the state in sustaining a housing finance system
- Make practical proposals for improvements of regulations in the favour of housing finance in their own country

Participant's Involvement during the Pilot Test

Students were expected to be available during the entire testing period (28 May – 8 June 2001). The pilot test was scheduled to cover two weeks (ten working days). An input of three hours per day was requested from the students who took part in the pilot test. That is to say they were expected to invest a total of 30 hours during a two-week period. Students were asked to follow the course and complete all the exercises in ("questions"). Any unsolved or skipped exercises were added to a task list in the "test room". Students were allowed to return later to the "task room" to complete unfinished questions. Students were asked to send completed exercises to the course moderator by e-mail.

During the course, students were also given a series of "open questions". These were not compulsory, but intended more to help stimulate a dialogue (discussion) with peers and/or moderators. It was also possible to do this by sending a question to the moderator (by using the "post a question" option).

Overview of Students Involved in the Pilot Test

The table below indicates where the students who participated in the pilot test came from:

Participant no.	Country	Organisation type
1	Egypt	Urban Training Institute
2	Egypt	University
3	Egypt	IHS-supported project
4	Egypt	Bank
5	Indonesia	IHS office
6	Indonesia	Local Government
7	Indonesia	Higher Education
8	Indonesia	NGO
9	Indonesia	
10	India	
11	India	
12	India	
13	India	
14	India	
15	UMC (Rotterdam)	IHS Masters Student
16	UMC (Rotterdam)	IHS Masters Student
17	UMC (Rotterdam)	IHS Masters Student

Table 3.4 Students involved in the pilot test of the Housing Finance module

It is known one participant was not able to meet up to the technical requirements of the course in terms of his computer specifications, and withdrew from taking part. Other prospective participants from an American University were not able to participate for logistical reasons (exams) and another group of students from Latin America was omitted during the pilot test, but may be approached after the evaluation of the pilot test, if needed. It is understood that the students from India (nos. 10-14) ultimately were unable to participate in the pilot test.

Paper Submission

The pilot students were also asked to submit a paper based on the following:

"Make an analysis of the housing issues in your country and explain if all key requirements can be met in order to establish an efficient housing finance system. Can you make also some recommendations for improvement? Use for this analysis the additional exercises A 1 to A9 (stored in the task room). The paper should have a length of approximately four pages. You should submit this paper to your moderator at any time, but by Friday the 22nd of June at the latest."

Rules for the Tasks

These were stated as follows:

"It is recommended to complete the course first.

- a. Chat or discussion with peers is optional.
- b. The analysis is sent to the moderator by e-mail. The moderator assesses the results and communicates the results via e-mail, individually, to each participant.
- c. The time frame can pass over the limits of the pilot period if necessary, the latest possibility however for submitting your paper is by Friday the 22nd of June."

Discussions

The tasks relating to participating in an asynchronous discussion were defined as follows:

"In the course you will also find a series of "tasks". From these tasks we expect you to participate in three types of discussions: one-to-one, group and team discussions. You must follow the announcements on the bulletin board and the roster you got when enrolling, in order to create/ enter into discussion on time."

As far is known this option was not used during the pilot test

Rules for e-mail Communication and Discussions

The following instructions were given to students participating in the pilot test:

"Please send e-mail questions only when necessary. Try to use all the materials this course provides you with before posting a question to the moderator. Do not send the same message twice. You will receive an answer as soon as possible.

You may communicate freely with your colleagues (see the Profile room, for names and addresses).

Online, try to be short, direct and explicit in your communications. Pay attention to the words you are using, since they will be the only carriers of your messages.

When forwarding messages, please, think of the privacy of the people involved. Make agreements where you think it might be a problem in this sense (...)"

Evaluation

During the pilot test period students were requested to fill in a logbook on a daily basis. At the end of the course they were also asked to fill in a questionnaire in order to access their views on both content and technical issues of the pilot module. The final course evaluation questionnaire was sent to all the participating students towards the end of the course. They

were asked to make use of the same computer throughout the entire test period for technical evaluation reasons.

Certificate

A course certificate was offered to all participants that successfully passed the pilot module on Housing Finance. The standards of assessment were the same as those used for a module in the IHS Masters Programme. The pass rate for this pilot on Housing Finance was an average of 5.5 marks out of ten.

Accessing the Module

The Web Based Training Housing Finance was accessible at the following web-site addresses:

<http://tate.ihs.nl/wbt> or <http://194.165.66.36/wbt>

To enable students to login to the web-site the administrator provided students before the start of the course with a username and password. Contact details of relevant IHS staff were provided to the students for dealing with content, technical and administrative issues relating to the pilot test.

Premature Timing of Pilot Test Phase

There is general consensus among the housing finance project team that the Housing Finance distance learning module may not have been ready when the test started. Project time pressure in relation to the amount of the budget still available, may have led to a hasty decision by the project manager to proceed with the pilot test as agreed. It is the author's expectation that this may have had a negative effect on the reception of the module by the test group. Especially when features that were promised were not implemented, such as Flash animations and the introduction Demo. Another problem was that features were still being added during the test phase. Simply said, the pilot test was premature.

Final Evaluation Report (still) Awaited

At the beginning of July 2001, no final project evaluation report had yet been received from the project manager. One reason for this may be a lack of feedback from the participants. One surmises that the premature launch of an incomplete product (a WBT distance learning module on Housing Finance) may have been to the detriment of this part of the learning process for IHS. Nevertheless, from a library perspective, the project has given rise to a number of issues relating to support of distance learning activities of the institute, some of which will be discussed in the next chapter.

Chapter 4: The Role of Libraries in Distance Learning Programmes

This chapter touches briefly on the literature about how libraries can provide support to distance learning programmes. The overview is not exhaustive but it does, however, place in context some of the main issues for libraries working in a distance learning environment.

One of the first publications on the subject was by Unwin, Stephens and Bolton. (Unwin, Stephens and Bolton 1998). At that time the methods of accessing and delivering content were much less sophisticated than is the case today. As this study focused on UK experiences, libraries were often found to be helping distance learners by more traditional means, such as sending (photocopies) of materials to students by post. One distance learning student who responded to the authors' questionnaire came with the suggestion:

“Distance learning students should be pioneers in the use (and so in shaping) the ‘virtual library’.” (Unwin, Stephens and Bolton 1998, p. 81)

In the same book, one response from a university library was that:

“Distance learning is a growth area for academic institutions. We need to allocate time to plan how to support the student, and market the library so departments running such courses are aware of the role of the library has in making the course a success or failure.” (Unwin, Stephens and Bolton 1998, p. 115)

Looking to the future developments it was observed:

“Access to both libraries and materials is a major issue. How long this will remain so, will depend on the rate at which more materials/services become available electronically, and the developments of a national infrastructure for electronic networks.” (Unwin, Stephens and Bolton 1998, p. 121)

Document delivery problems were expected to ease as new technology (electronic delivery systems for an ever increasing amount of material, together with those for electronic journals) became more widespread. It was expected that new technology would increase the ease of access to materials, not only nationally, but also across networks, and that would include end-user training materials for both electronic and traditional sources.

Traditional Sources Prevail

Even today, it is unclear how much material used by distance learning students, is supplemented by traditional printed materials. The US Copyright Office estimated between 75 – 100 % of “course packs” developed for distance students are still (in 1999) printed and mailed to distance education students. A picture confirmed by the research of Unwin, Stephens and Bolton. This was reinforced by a course provider's observation:

“[We] prescribe approximately five, six, or eight books that we expect people to buy (for each module) and then we provide a resource file of extracts from journals and books. These two things combined cover all their reading needs as far as the modules are concerned.” (Unwin, Stephens and Bolton 1998, p. 144)

Problem of Being the First

The conclusions of Unwin, Stephens and Bolton may have been to large extent been overtaken by events and the speed with which distance learning delivery methods are changing, evolving and expanding. Libraries had an important role to play then, and can expect to play an important role in the future. Looking into their crystal ball they predicted:

“The concept of the ‘virtual library’ may help in part, but students also want to work and browse in ‘real’ libraries. Developing research skills and learning that research can lead into ‘dead ends’ are important processes for all postgraduate students.” (Unwin, Stephens and Bolton 1998, p. 209)

Digital Libraries and Electronic Reserve Collections

Ellison mentions the possibility of creating specially designed resources (digital libraries) to enable learners to access library resources directly from their computer.

“In addition the testing of learners over the distance learning delivery systems makes it possible for the learner to take 100 percent of a course by distance learning.” (Ellison 2000, p. 241)

In the Housing Finance pilot project the initial aim was to deliver as much content as possible, but it remains questionable whether there was sufficient content available to students, for them to be able to effectively complete the course 100 percent online.

Access to Resources

Ellison expressed one of the main problems from the point of view of libraries as follows:

“Libraries are faced with the task of helping to provide distance learners with the resources and access to resources like never before in the history of the profession.” (Ellison 2000, p. 241)

In addition it is pointed out that such learners often need fingertip access to resources never before delivered by small libraries in isolated communities. Although local libraries may have a role in helping gain access to such resources, Ellison concludes that the major resources and access should be provided by the institution delivering instruction.

Ways of Providing Access to Resources

What is the best way for educational institutions to provide access to its information resources for its distance learning students? Some institutions Ellison suggests provide a distance-learning librarian who works directly with students taking such courses and the instructors who deliver the content. Another way to do it is to have extensive distance learning library Web pages offering immediate access to the OPAC; serial indexes and sometime actual articles along with on-line reference collection learners can access through their computers. There are also comprehensive interlibrary loan units who can borrow materials and deliver them directly to the home of the learner via fax, mail or by other means. (Ellison 2000, p. 241)

Ramifications of Distance Learning for Libraries

Ellison concludes:

“Distance learning over the Internet is radically changing the way we deliver education and provide instructional resources for the learner. Librarians must be at the forefront of this effort to deliver quality access, environments and resources that meet the needs of the distance learner. The old way of doing things in libraries like developing collections, organising materials and servicing the user will not accommodate learning needs today.” (Ellison 2000, p. 242)

The conclusion seems to be at odds with what Unwin, Stephens and Bolton predicted in the context of the research role of traditional libraries. Both conclusions, however, are valid in the contexts in which they were written.

Inputs of the IHS Library during the Housing Finance Pilot Project

From the outset of the Housing Finance pilot project the Atos Origin Educational Designer defined the library deliverables as follows:

- A. Relevant support material for the Housing Finance course
 - B. Tailored and more general information for the virtual library (“study room”)
- (See initial proposal at Annex A)

Support Material

The main deliverable for support turned out to be IHS images that were selected from an in-house image database. These were selected on the basis of information provided by the main IHS Housing Finance content expert and the analysis done by the Atos Origin Educational Designer. The following image, has for example, been incorporated into Housing Finance distance learning module (see also Figure 3.1 in Chapter 3).



Figure 4.1 Example of an image selected from the IHS Image database

About forty images were selected from the IHS image database for (possible) inclusion in the Housing Finance distance learning module. These were incorporated into a Word document sent to Atos Origin.

Future Use of Images

The current IHS image database only has 315 images. If IHS wishes to develop their use further in the context of including them to illustrate its distance learning programme, the organisation will have to increase and improve its access to such images. A proposal is currently being developed, in collaboration with the library, for follow-up within IHS to improve image management within the institution. The aim is to increase access to digital image material in a standard setting. One of the options under consideration is to use browser technology.

Virtual Library

The Atos Origin Instructional Designer defined the virtual library as follows:

“The study room is a virtual space where the student has access to on-line libraries [a library in the U.S. could be here connected. I need confirmation], or to links to other relevant sources. It is also meant as a library (container) in itself for PDF files (readers) that students can get from their coaches or by themselves, and a place to store their own works. The integration of an intelligent search-engine might be of use

here by selecting links to items that relate to questions, statements etc. present in the recent work of the students or teachers. It must also contain in a comprehensive way a list with recommended bibliography that can be modified only by the responsible co-ordinator.”

This proved quite an ambitious definition given the current IHS information architecture, where the current emphasis is still on printed materials, and less on electronic storage.

Elements of the Virtual Library Delivered by the IHS Library

Given its current information capacity the IHS library provided the Housing Finance distance learning module with the following:

- An extensive (28) page bibliography (in Word) entitled: Documents, Articles and Sources on Housing Finance (sorted by year)

Figure 4.2 shows what it looks like online.

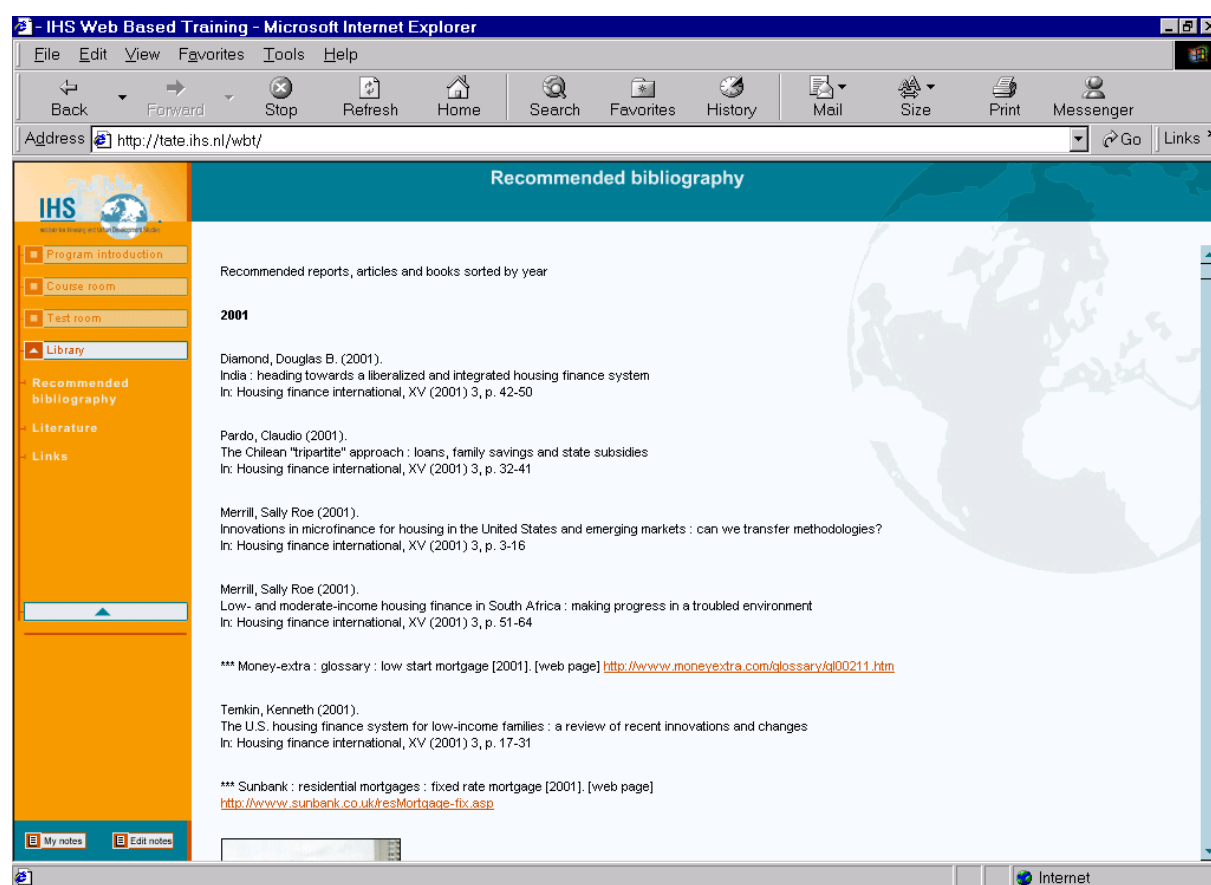


Figure 4.2 Bibliography on Housing Finance as provided by the IHS library

The term “Recommended Bibliography” should have been limited only to materials mentioned in the original Reader of the Housing Finance course.

Links Page

The other main deliverable that the IHS library provided for the Housing Finance distance learning module was a links page. This was provided in Word. Figure 4.3 shows what that looked like online.

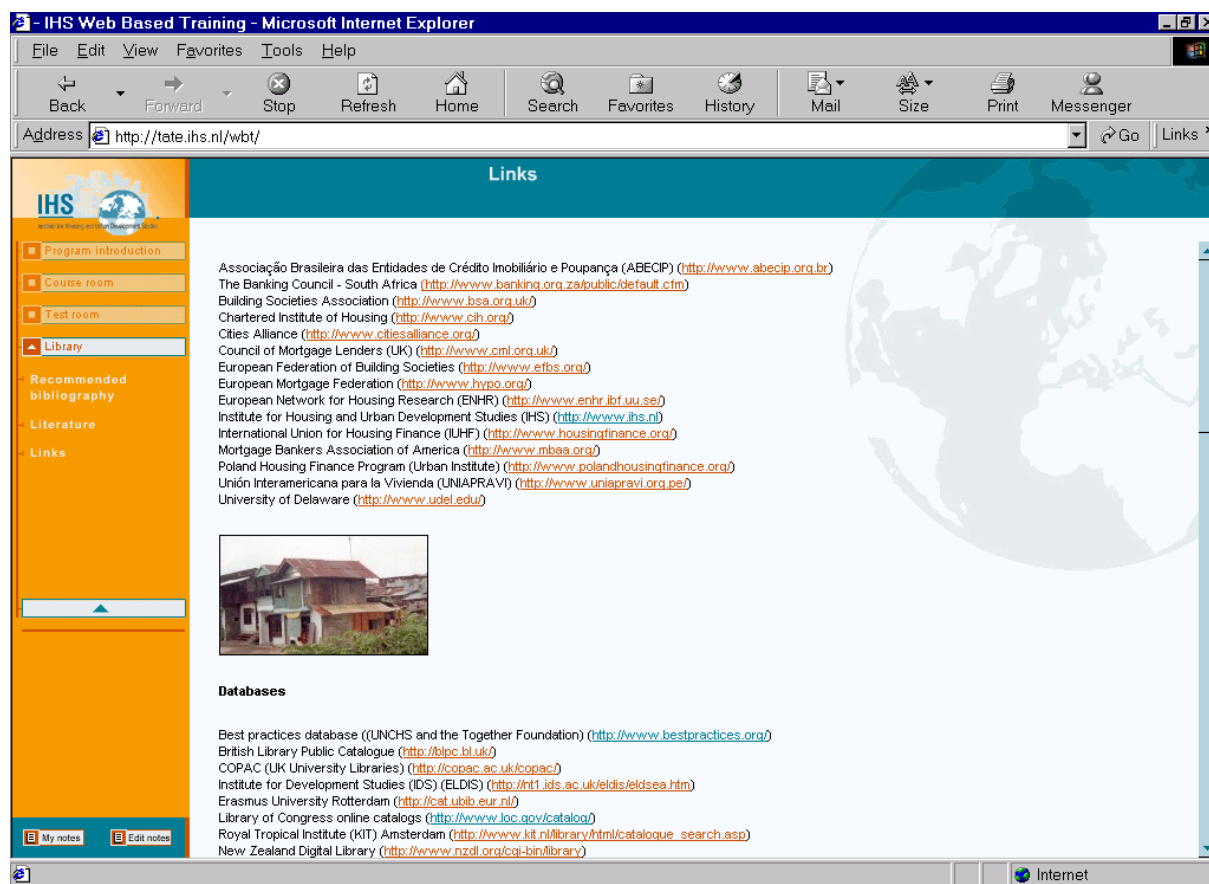


Figure 4.3 Housing Finance Distance Learning Module Links page

Copyright

The other major input by the IHS library was a review of copyright issues in relation to distance learning. This was presented to the project leader for inclusion in the final evaluation of the pilot project. It is included here in its entirety as a separate chapter (see Chapter 6).

Electronic Archive

During the Housing Finance pilot project the IHS library was not able to provide Readers/Course Packs in pdf format. However, an extensive internal archive of electronic resource materials on Housing Finance was developed, mainly in the form of pdf files of journal articles, particularly from the Journal *Housing Finance International*. It is certain that copyright legislation would not permit IHS to redistribute this material in its own right. On the basis of a careful selection, it may be feasible to include this type of material in electronic Readers/Course Packs. The intention would be to only make such Readers available to formally registered distance learning students, either through Internet (password protected) or on a CD-ROM with encryption. The Housing Finance prototype of an electronic (internal) reserve collection could be used to provide library support to the IHS content provider. This

material, following a decision of the project team, was not made available to students during the Housing Finance pilot project. Figure 4.4 gives an indication of the current structure of this electronic reserve. The final electronic reserve should be greatly reduced to include only key documents used in Readers/Course Packs.

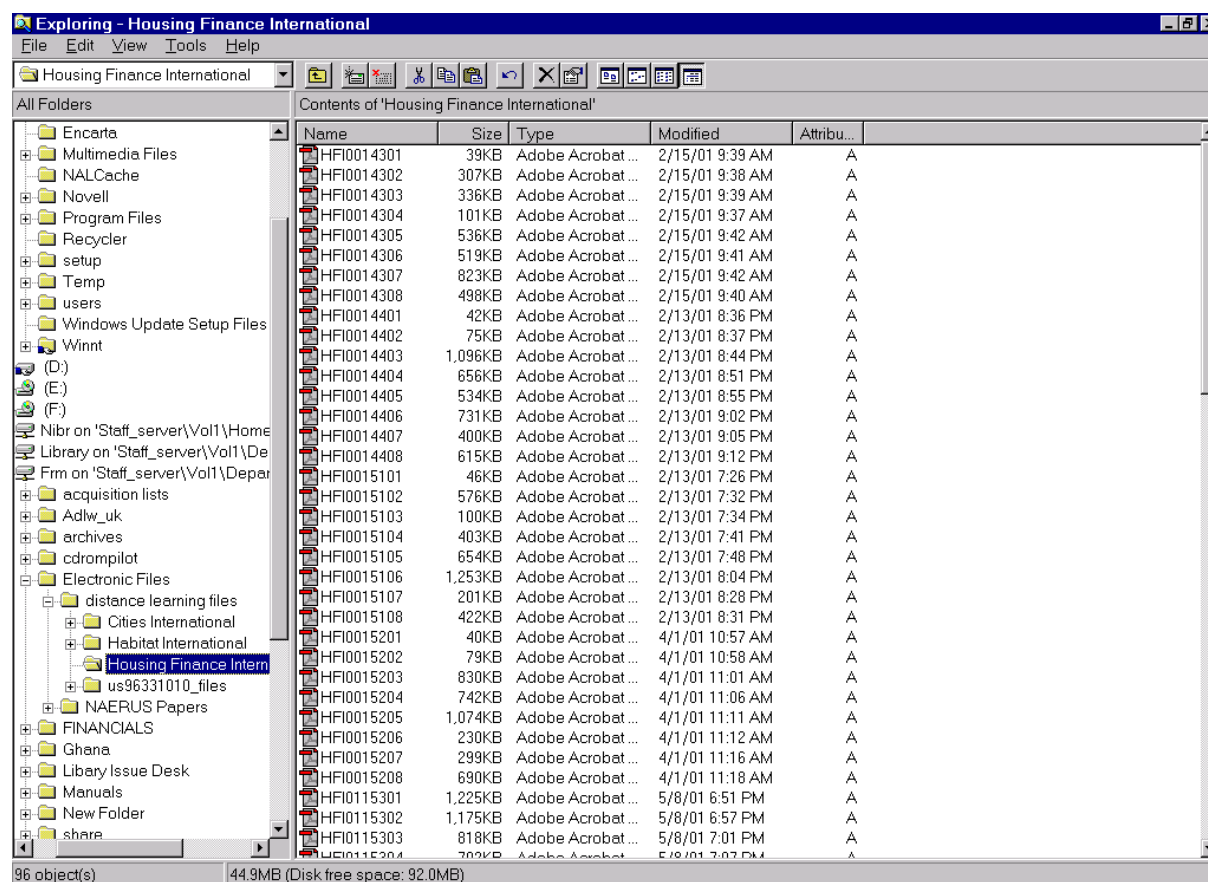


Figure 4.4 A prototype electronic reserve on Housing Finance

The next chapter considers the main issues for future development, in respect of the library in relation to the wider TATE programme. There I will come back to the issue of developing an electronic reserve of key documents that are included in Readers/Course Packs.

Chapter 5: Building up an Information Architecture to Facilitate the TATE Distance Learning Programme at the IHS

Information Management Report

For the assignment of the Information Management module of the IDM training, the author compiled a report that was intended to serve as internal policy document for the IHS library. That document intended to contribute to the process on transforming the current paper-based information architecture of the institute, into one that makes much greater use of the digital opportunities that currently exist. The library's responses to the Distance Learning Programme at IHS can be seen in that context as an extension of the ideas that have already been expressed there. (Browne 2001)

Electronic Texts - Access Journals

As was mentioned under theme 4 of the above report, an increasing number of journals are becoming available electronically. This possibility makes it much easier to create electronic reserve collections of key documents (especially journal articles) for internal use. One of the problems here remains that of copyright. Publishers such as Elsevier have detailed online license agreements that to try and protect their materials. (ScienceDirect web editions : completed online license agreement 2000). An example of such a contract is included in Annex C.

Definition of Users

The Elsevier license agreement defines "authorised users" for academic institutions as:

"Faculty members (including temporary or exchange faculty for the duration of their assignment); graduate and undergraduate students; staff members; and independent contractors acting as faculty or staff members;" (ScienceDirect web editions : completed online license agreement 2000, p. 1)

It is also stipulated that the "authorised users" have to be made aware of the agreement. The question here is to ensure that in this definition, the definition of students also includes those students enrolled for distance learning modules.

What are Users Allowed to do

The agreement grants the Subscriber and its Authorised Users the right and license to access the on-line versions corresponding to print journal subscriptions subscribed to by the Subscriber, namely to:

- view and browse tables of contents, view articles published in recent issues of Subscribed Content, and utilise the current awareness feature available through (...)
- view, print and/or download from Subscribed Content excerpts of reasonable quantity, provided that use of such excerpts is personal, does not amount to or result in commercial distribution, and is limited to the Authorised User

obtaining such excerpt (ScienceDirect web editions : completed online license agreement 2000, p. 1)

The agreement also allows for “walk in users” to have access and copy for scholarly, research, educational and personal use (but not for resale), but that remote access is permitted only for Authorised Users. In this clause the contract has a potentially fairly narrow definition of this group:

“Authorised Users are limited to those for whom the Subscriber is their place of employment or study.” (ScienceDirect web editions : completed online license agreement 2000, p. 1-2)

User Restrictions

The license agreement forbids:

- “i substantial or systematic reproduction;
- ii re-distribution, re-selling or sub-licensing in any manner including in connection with fee-for-service use;
- iii systematic supply or distribution in any form to anyone other than an Authorised User;
- iv systematic or substantial retention so as to diminish or potentially diminish the commercial value of such information; or
- v interlibrary loans (ScienceDirect web editions : completed online license agreement 2000, p. 2)

Alteration Notices

The agreement also states:

“Neither Subscriber nor its Authorised Users may modify, adapt, transform, translate or create any derivative work based on any materials or other content included in the SDWE Service, or otherwise use same in a manner that would infringe the copyright or other proprietary rights therein. Copyright notices or disclaimers included in the SDWE Service or otherwise in the Subscribed Content may not be removed, obscured or modified in any way (ScienceDirect web editions : completed online license agreement 2000, p. 2)

Develop New Business Models

It is evident from the above that there is a need for new business models to be adopted by all parties involved in providing content. It will require creative thinking to ensure that the definition of “Authorised User” also includes distance learners. Equally important is the means of access. If a distance learner cannot access content from his or her own computer through the Internet, it would make sense to offer that content in the form of an integrated package (course plus content). The content has in the past, been offered in the form of a photocopied Reader/Course Pack. It would make sense that the IHS library started to build up an electronic reserve of Readers/Course Packs to enable the institute to be able to service those clients that do not have adequate access to the Internet. This could be distributed on “encrypted” CD-ROMs that are set-up in such a way that further redistribution is impossible.

There is no doubt that in the short term, many of IHS's potential target audience in developing countries will not have sufficient access to the Internet, in order to allow them to take part in IHS distance learning courses.

Creating the Appropriate Electronic Information Base

One of the main things that IHS lacks at the moment is an electronic information base of all its Readers/Course Packs. Recent material, in the form of journal articles, could be stored on incidental basis, in order to build up for each Reader, a PDF copy of each article used in a particular reader. Next to that you will need to incorporate the material that some lecturers compile themselves for inclusion in a particular Reader, as well ensuring that any other materials, such as book chapters, are scanned and stored in the same format. In this way the institute's electronic content information base would be consolidated.

Guidelines for Distance Learning Library Services

Annex D consists of guidelines for distance learning library services produced by the Association of College and Research Libraries (ACRL). (ACRL 2001) These provide practical tips on the role of libraries in the distance learning environment. These guidelines list fourteen points that library administrators (librarians) should as a minimum undertake when supporting distance learning programmes. Application of these to the IHS library context is desirable. Every effort will be made to implement them during the remaining development of IHS's TATE programme. They will be incorporated into the specific recommendations for the IHS library in this report.

Internet

During the Housing Finance pilot project much effort was put into finding and using information on the Internet. A similar effort will be needed to extend access to internet sources to all other subject areas that are of interest, not only in the context of the TATE programme, but also as part of a wider effort by the IHS library increase its access to Internet sources. A spin-off of this activity will be that some of the links to organisations and documents on the Internet could also be used for enhancing content to distance learning students, as was done with the links and recommended bibliography sections of the Housing Finance distance learning module.

Illusion of Providing a Fully integrated Course

It is the expectation of the author that any course provided in a distance-learning format will require content material to supplement the main course. This was not done in the Housing Finance module as the focus was on testing the technology. However, future modules will probably not be able to stand alone, without any content support from the library. That is why it is essential that the IHS library makes sure from the outset that proper content support can be offered. The process is complicated by the desire of publishers not to see their content markets spoiled by reckless redistribution of their content. There is a need to find the right balance between the interests of the academic community and those of the publishers. The issues in the next chapter, on copyright, illustrate how difficult that is to achieve in the distance learning environment.

Chapter 6: Copyright in the digital distance learning environment – issues for IHS to consider

Note: The text of this chapter was sent at the beginning of June 2001 to the Atos Origin project manager of the Housing Finance pilot project as input to the final evaluation report. As such it has been included in this report in its entirety as it represents one of the major inputs of the IHS library to that project.

Introduction

This short report is about the issue of copyright in the context of digital distance learning. It has been written with two objectives in mind. First of all to serve as a chapter in the evaluation of a recent pilot project at the Institute for Housing and Urban Development Studies (IHS) concerning the establishment of a Housing Finance distance learning module. Secondly, it will form the basis of a chapter in a wider study currently being undertaken by the author, in the context of a practical assignment for the post graduate training, Integral Document Management (IDM). The latter assignment aims to examine the general role of libraries in distance learning programmes.

Special attention has to be paid to the issue of copyright. This need has been evident from the outset of the pilot project that commenced at the end of last year. In the context of distance learning it is an issue that is still evolving and one that may change as law courts are asked to deliberate on the issues that arise. A complicating factor is that because distance learning by definition crosses international borders, it is not always clear under which jurisdiction (country) the copyright issues need to be contested. Add to this the uncertainty of all parties involved regarding what is and what is not allowed by the so-called “fair use” doctrine. This report suggests some issues that the IHS should consider in its future digital distance learning programmes in connection with copyright.

Digital Distance Learning and Copyright

Simply defined, distance education/learning is a form of education in which students are separated from their instructors by time and/or space. Students who sign up for such distance education courses at higher education levels are generally professionals whose jobs inhibit them from attending classes on a campus. Current digital distance learning programmes involve copyrighted works being used in new ways, providing new benefits for students and teachers. Even in distance education courses delivered entirely through digital media, students still rely on textbooks. Digital distance learning courses also imply new risks for copyright owners.

Asking for Permission (License) versus having Access

In practice, there may be occasions when it will be wiser for institutes to negotiate licenses directly with copyright owners, to facilitate the use of certain copyrighted works in distance learning programmes. In such cases, an educational institution and the copyright owner will need to agree upon appropriate terms. Educational institutions will also need to negotiate site licences with content providers, particularly for access to academic journals, that can be applied to all university staff and students, including registered distance learning students. At

present academic staff at educational institutions rely upon copyright law provisions that exempt them from requesting permission. In the pre-digital era this was fairly simple to apply.

Library Inputs

Library resources are used in digital distance learning programmes, either in the context of materials available under licence, or in order to provide facilities and support staff for making online courses available to students. Libraries can assist in preparing materials in digital form, and give advice on copyright issues. It is common for distance educators to provide access to selected library resources in digital form for their classes. Such resources may be designated as electronic reserves, the digital equivalent of reserve collection materials for on-campus courses, which the instructor sets aside for outside reading to supplement primary course materials. Libraries are crucial for institutions to provide access to resource materials in digital form. Ideally electronic reserves should be included in any exemption from the copyright law. At present this is not the case. These or other electronic materials can only be made available to remote-site students if the site (institutional) licenses obtained through the library allow it.

CD-ROM Delivery Mechanism

Assuming the library is able to build up a sufficient digital reserve of course pack (Reader) materials, then it would be logical to utilise CD-ROM technology to target distance learning students with the materials that they will need to complete a course. In this context the advantages of the CD-ROM mechanism for delivering such information include:

- i. Possibility to control access and improve security through encryption technologies
- ii. Possibility to store and distribute large amounts of data
- iii. No need for expensive Internet connections and password problems
- iv. Giving IHS information Control i.e. .read-only files that cannot be copied
- v. Course material can be included in the CD ROM package thus cutting sending costs

This is an activity that the library may be best suited to perform.

Legal Complications Caused by the Digital Context

Within the digital environment, in the context of access being granted to a particular body of copyrighted information, there has been a shift away from the provisions of copyright law, to a business model based more on contract law. This may have fundamental ramifications for the (future) relationship of educational community with the commercial publishing world (content owners). There is a danger that in some cases the need to apply copyright law may be circumvented by applying contract law for specific license agreements. That is to say copyright legislation may be overtaken by new restrictions arising from the way contracts will be drawn up by content providers, using licenses under contract law, in which the emphasis will be on access to information, and less on the exemptions that the existing copyright legislation permits. The concern being that the current balance of interests, between the free flow of information of the educational community and the commercial interests of publishers (content provider/copyright owners), may be distorted in the new digital information context.

Report on Copyright and Digital Distance Education

A report to the American Congress provides an analysis of the application of current American copyright law to digital distance learning (*Report on copyright and digital distance education ... 1999*). The arguments provided in that report form the basis of the discussion, and it also appears to have been significant in the subsequent debates that have ensued. A summary of the main issues will be given below. The report describes how educational institutions offering distance education draw on library resources in several ways, including providing support for online courses to *provide access to supplemental materials in digital form*. (*Report on copyright and digital distance education ... 1999*, p ii).

General Principles

Because the Americans have been in the forefront of developing the concepts and tools associated with distance learning, their experiences in connection with copyright in this context represent a useful point of departure on the main issues involved. There are two other major treaties relating to international intellectual property rights. These are the Berne Convention (see <http://www.law.cornell.edu/treaties/berne/overview.html>) the TRIPS Agreement (*Agreement on trade-related aspects of international property rights 1994*). However, our attention will focus on the American legislation as described in the U.S Copyright Office report, as this also pays due respect to the above mentioned international treaties. According to the American Copyright Law:

(...)Copyright confers on the owner a bundle of exclusive rights to make or authorise certain uses of the work: to reproduce it in copies or phonorecords; to prepare derivative works (such as adaptations or translations); to distribute copies to the public; to perform the work publicly, limited in the case of sound recordings to performances by means of a digital audio transmission; and to display the work publicly. These rights are divisible, and may be licensed or sold together or separately. The exercise of any of the exclusive rights in a copyrighted work without the authorisation of the copyright owner is an infringement, unless an exception applies. The Copyright Act contains numerous exceptions, including several that are particularly relevant to educational uses. (*Report on copyright and digital distance education ... 1999*, pp. 69-70).

Types of Licenses

The report by the U.S. Copyright Office distinguishes three types of licenses that are in use in connection with digital distance education courses: transactional licenses for analogue use, transactional licenses for digital uses, and site licenses. A definition for each type is given:

(...)Transactional licenses for analogue uses are used in distance education to authorise course packs or other supplementary materials that are reproduced in paper copies and sent to distance education students. (...) Transactional licenses for digital uses generally authorise a specific use of a work in digital form. In addition to covering course packs, such licenses may permit an educator to digitise analogue materials, or to reproduce, distribute, perform or display a work in digital form. (...) In contrast to fee-per-use transactional licenses, site licenses authorise all uses of a certain type of a number of copyrighted works, by a particular user or group, for a set

length of time. Site licenses are often relied on in the academic world to authorise university-wide use of software, or of databases of scholarly material, such as a collection of journals or periodicals. The license is negotiated to cover the extent of projected multiple uses, based on the size and nature of the community that will be served. Typically the authorised group is limited to a physical site, such as a university campus, although site licenses can also authorise access and use by a defined group of users, regardless of their physical location. (*Report on copyright and digital distance education ... 1999*, pp. 33-34).

Current IHS Practice on Readers (Course Packs)

The current practice of IHS is that course packs are made for each course in the form of a Reader. However, as far is known, IHS does not appear to have obtained transactional licenses for the analogue use of such materials. Neither has it adopted the kind of agreement sanctioned by the Erasmus University to cover this kind of activity (see <http://www.eur.nl/feb/contracten/overeenkomst%20PRO%20VSNU.htm>). It is unclear to what extent the above agreement is institutionalised among the teaching staff of the Erasmus University. Nevertheless, an IHS policy will need to be developed for the digital distance learning environment on these types of issues.

Printed Materials

Between 75 – 100 % of “course packs” developed for distance students are (still) printed and mailed to distance education students once a paid order is received. (*Report on copyright and digital distance education ... 1999*, Appendix E, p 10). The expectation is that printed Readers will be used in conjunction with digital distance learning courses, with the latter being an additional delivery mechanism beyond the traditional classroom. As has been suggested, CD-ROMs may also be an appropriate means to distribute distance learning materials to registered students.

Electronic Reserve Systems

Electronic Reserve Systems have replaced the traditional Reserve Desk at which students could borrow specific, supplemental course materials assigned by a lecturer. An electronic reserve system contains digital copies of the selected materials. Students enrolled in a course can access them. Such reserve systems allow the library to scan the supplemental course materials assigned by the faculty (usually journal articles, newspaper excerpts, and book chapters) into one of several available software systems. Electronic reserve systems consist of hardware components (a flatbed scanner, secure server, and networked workstations), software (document management and administration, user authentication and access controls), and administrative systems (procedures for identifying enrolled students, for administering the material, and etc). Such systems manage the scanned materials (generally text materials); manage access for enrolled and authorised students only, generally by password; and may restrict further copying or distribution of the materials. The earliest systems limited viewing to workstations in the library, but these days authorised students may access these materials from any desktop. (*Report on copyright and digital distance education ... 1999*, Appendix E, p 11).

Role of Site Licenses

The best solution would be to negotiate participation as part of a site license, as described above. The most logical solution is for the IHS to gain access to the information network of the Erasmus University and its associated site licenses for academic journals. This may well reduce the need to explore the options for transactional licenses for analogue uses. In the past this was the main use of licenses for digital distance learning. As has been pointed out above, the IHS policy in respect of its Readers suggests that little use had been made of such license agreements for analogue materials. The expectation is that more use will be made of site licenses. One of the problems is that university site licenses are often limited to on-campus authorised users (staff and students) and such stipulations in agreements may prevent remote students from accessing material, or such students will be obliged to pay high fees in order to be added to the license. In addition, it does occur, even under a site license, access problems may still occur. A common problem being that the content provider's system requests a password that is not always evident to the user.

Doctrine of "Fair Use"

Many educational institutions seem to rely on exemptions in the (American) copyright law to use copyrighted works in their distance learning programmes. How these exemptions work, particularly the application of "*fair use*" will be briefly described here. To be eligible for exemption under section 110(2) of the U.S. Copyright Act, an educational institution must be "non-profit". The IHS complies with this criterion. Sections 107 and 110 of the U.S. Copyright Act cover the "fair use" doctrine. The report describes it as follows:

Fair use is the broadest and most general limitation on the exclusive rights of copyright owners, and can exempt distance education uses not covered by the specific instructional exemptions. It is flexible and technology-neutral, and continues to be a critical exemption for educational users in the digital world. It requires courts to examine all the facts and circumstances, weighing four nonexclusive statutory factors. While there are not yet any cases addressing the application of fair use to digital distance education, a court's analysis will depend on elements such as the *subject matter of the course, the nature of the educational institution, the ways in which the instructor uses the material, and the kinds and amounts of materials used* (Report on copyright and digital distance education ... 1999, p. viii) [my italics]

Fair use remains a critical exemption in the context of distance learning. It represents the widest and most flexible exemption for educational users in the analogue context. It is expected to retain the same role in a digital environment. What needs to be decided is not whether the doctrine of "*fair use*" has a place in distance digital learning, but rather how it needs to be applied.

European Union Position

One aspect that will need to be considered, however, is that of European regulations that are about to be changed. The European Union Directive on the Harmonisation of Certain Aspects of Copyright and Related Rights in the Information Society would permit member states to establish limitations on the rights of reproduction and communication to the public. Only a single use will be permitted for the purpose of illustration for teaching, as long as the source is

indicated and to the extent justified by non-commercial purpose, on the condition that the rights holder receives equitable compensation. The latest position of the European Union can be found at: <http://www2.europarl.eu.int/omk/OM-Europarl?PROG=REPORT&L=EN&PUBREF=-//EP//NONSGML+REPORT+A5-2001-0043+0+DOC+PDF+V0//EN&LEVEL=4>

What is of particular concern is that through the amendments that were passed, the European Union's position on copyright seems to have shifted more in favour of the copyright holders (publishers). Under the text, as approved, authors, performers, producers and broadcasting organisations will in principle enjoy exclusive rights regarding the reproduction, communication and dissemination of their work. However, there will be certain exceptions and limitations as well. In addition, Member States will have the option of introducing exceptions or limitations to the principle of authors' rights to take account of the interests of the public, the industry and certain specific categories (e.g. persons with disabilities) or of certain purposes (reproduction by the press, religious purposes) or of the need to promote scientific research and artistic works. In some cases these exceptions or limitations are only allowed on condition that the right holder receives 'fair compensation', in other cases again, that the source, including the author's name, is indicated.

Ramifications for Digital Distance Learning

If adopted this amendment could have serious ramifications for the interpretation of the doctrine of "fair use" as currently applied by educational institutions, and indeed, if applied rigorously, could effectively kill off the digital distance education market before it has even had a chance to properly develop in Europe. The American position, of giving new business models and technology the chance to evolve and develop, seems to be a more forward-looking position. Nevertheless, whatever the European Union decides upon in terms of copyright legislation, it needs to be taken seriously into account, before embarking on extensive investment in digital distance learning activities.

Report's Conclusions

The report by the U.S. copyright office concludes:

There is virtual unanimity that the doctrine of fair use is fully applicable to uses of copyrighted works in the digital environment, including in distance education. (This does not mean that all agree as to which digital distance education activities would qualify as fair.) (*Report on copyright and digital distance education ... 1999*, p. xi).

Although the *fair use* doctrine has allowed a degree of flexibility, on the other hand, that very flexibility has led to uncertainty. There is very little case law concerning copyright and the use of new technologies. This in turn has only increased the uncertainty. The report mentions that libraries also wished to obtain exemptions for additional activities in the areas of providing access to electronic reserves and other resources materials in order to provide a high-quality educational experience for students at remote sites (*Report on copyright and digital distance learning ... 1999*, p. xiii). Educational institutions have various technological ways of limiting access to their distance learning programmes. These include password protection, firewalls, screening for IP addresses or domain names, hardware connections, encryption, or using CD-ROMs as a delivery mechanism. One of the main conclusions of the U.S Copyright Office report in respect of the application of Copyright Law to digital distance learning activities was that:

(...) existing restrictions should be retained and markets permitted to evolve, subject to further review. Critical to this conclusion is the continued availability of the fair use doctrine as a safety valve. (*Report on copyright and digital distance education ...* 1999, p. xvi).

Other Recommendations

They also recommended:

(...) it is important to retain meaningful limitations on the eligible recipients; the performances or displays should not be made available to the general public. We recommend permitting transmissions to be made to students officially enrolled in the course, regardless of their physical location. Since today's digital and scrambling technologies allow transmissions to be targeted more precisely, the requirement should be added that the transmission must be made solely, to the extent technologically feasible, for reception by the defined class of eligible recipients. (*Report on copyright and digital distance education ...* 1999, p. xviii).

Copyright Guidelines

The report also suggests some safeguards to prevent uncontrolled copying and distribution of digital materials by students. Measures that were suggested included that:

(...) any transient copies permitted under the exemption should be retained for no longer than reasonably necessary to complete the transmission. Second, those seeking to invoke the exemption should be required to institute policies regarding copyright; to provide informational materials to faculty, students, and relevant staff members that accurately describe and promote compliance with copyright law; and to provide notice to students that materials may be subject to copyright protection (*Report on copyright and digital distance education ...* 1999, p. xviii).

It is apparent that some American Universities have taken heed of this recommendation, and on many American University web sites, there are special sections dealing with copyright issues. These pages target both university staff and students. An example of such a web page can be found at: <http://fairuse.stanford.edu/> Copyright guidelines are intended to act as a safe harbour for the public, but are not intended to be absolute on what is allowed, in terms of copyright law. Nevertheless, the adoption of some corporate copyright guidelines by the IHS may help to educate staff and students on this issue.

Conclusions and Recommendations for the IHS

On the basis of the above brief summary of the main issues involved concerning copyright and digital distance learning the following conclusions and recommendations can be drawn for the IHS;

- As a non-profit educational institute the IHS can legitimately apply the “*fair use*” doctrine to the development of its distance learning modules.
- “*Fair use*” is not an absolute concept and can be contested in the courts. In the American context there are four criteria that are important:
 - i. the subject matter of the course,
 - ii. the nature of the education institution,
 - iii. the ways in which the instructor uses the material, and
 - iv. the kinds and amounts of materials used.
- In an effort to increase the understanding on what “*fair use*” entails, many American universities have undertaken special programmes to educate faculty staff and students on copyright issues. This is something that the IHS should also consider doing.
- Related to this, the IHS would be wise to develop its own general copyright policies
 - for its own materials;
 - for the use of other materials in the context of “*fair use*”.
- In addition, even though some copyright issues relating to electronic reserves are unresolved, the IHS should go ahead and develop its own system for building up an electronic reserve of key materials (particularly for materials now used in its Readers).
- Many courses will still require printed material, or ideally material on a CD-ROM (see separate paragraph on the second page of this chapter), to be sent to distance learning students to supplement the digital distance learning course delivery mechanism.
- One way to ensure access to electronic materials is to allow the IHS to fall under the umbrella of the site license of the Erasmus University Library. Even then, remote students are not always guaranteed problem-free access to digital information.
- The IHS should make sure that access to its digital distance learning courses are limited only to students registered for particular modules that are being offered through the distance learning medium. Such students could have access through a password.
- A concern is the policy of the European Union. This may upset the delicate balance between the interests of the copyright owners and educational institutions that the current “*fair use*” doctrine provides.

Chapter 7 Conclusions and Recommendations

This chapter is divided into five sections, namely:

- for IHS
- on the Housing Finance Pilot Project
- for the TATE Programme
- on IHS library support to the distance-learning programmes of IHS
- final conclusion

Conclusions for IHS

The main conclusions for IHS are that:

- translating existing course content will be a complex and time-consuming process that will need the full commitment of the involved content experts;
- content experts will not always have enough time to properly participate in this process;
- (electronic) image management within the institute needs to be addressed
- distance learning is a course delivery method that will need some form of additional content support materials (print and/or electronic) to reinforce the messages being transmitted through the courses;
- students will expect **access** to additional information resources such as Readers/course packs;
- there is a need for IHS to develop and maintain copyright guidelines to inform its staff and students of the main principles of copyright legislation;
- the doctrine of “fair use” can legitimately be applied to IHS’s distance learning activities;
- the TATE programme at IHS presents the organisation with the opportunity to set up a professional electronic information reserve of its key knowledge base;
- once established, maintenance of such a electronic information base would be a routine matter.

Recommendations for IHS

From these conclusions the following recommendation for the IHS can be made:

- IHS content providers should to be trained in how to prepare content for the distance-learning environment;
- IHS library staff should work in close collaboration with IHS course instructors to develop appropriate (additional) course materials, either in the form of electronic reserves collections, electronic Readers (course packs) and Internet resources.
- Other staff, such as the Course Bureau of the IHS, will need to acquire new skills in order to support course instructors and the IHS library in the realisation of the above electronic resources;
- IHS procedures should be changed, where appropriate, to encourage the shift from paper to electronic course materials;
- the organisation must have sufficient internal capacity to maintain such an electronic resource base, particularly in terms of scanning equipment, staff trained in scanning techniques, and sufficient computer storage space

- IHS should develop a formal copyright policy that includes guidelines for staff and students on how not to infringe on copyright law
- IHS distance learning students should be “authorised users” with full access to the institute’s information resources, including online journals
- IHS must improve its image management procedures in order to be able to supply electronic image material to subsequent distance learning modules (a project proposal is currently under preparation).

Conclusions on the Housing Finance Pilot Project

The main conclusions on the Housing Finance Pilot Project are:

- the pilot test of the module was premature;
- a “HELP function” was omitted from the final module;
- the final evaluation report was still awaited;
- tighter editorial control is needed on the English of any addition content that was provided by non English-speaking project members;
- the focus of the module was on the technique and not just content, so it had a strong built in testing of learners capability;
- the library section of the module needs to be redesigned into a short list of “recommended reading” based on the Reader and a longer list of additional reading, covering all other references;
- too many links included in the additional content material of the main module were dead.

Recommendations on The Housing Finance Pilot Project

The main recommendations arising from the above conclusions are:

- include a “HELP function” that includes a proper demo on how to use all the functions in the module
- double-check the English used throughout the module
- double-check all the links used throughout the module and develop a procedure to rectify broken links
- redesign the “library” section of the module to closely reflect the content of the original Reader.

Conclusions for the TATE Programme

The main conclusions for the TATE Programme are:

- no decision was taken during the Housing Finance pilot project on the choice of a LSM and/or LCMS
- following on from what happened in the Housing Finance pilot project, it may be necessary to have an English Language editor check future modules not on content but on their English
- there may be a need to consider obtaining some information resources under license;
- the issue of distance learners *access* to information resources needs to be sorted out (recognition as “authorised users”)
- CD-ROMs should be considered as an alternative mode of delivery for students with inadequate Internet connections.

Recommendations for the TATE Programme

The main recommendations for the TATE Programme are:

- depending on whether IHS is concerned about managing courses or content, a decision is needed on whether IHS purchases a LMS or a LCMS (whatever the choice it may have significant financial and organisational consequences for the further development of the programme;
- an English speaking editor should be engaged to edit the English of the modules as they become available;
- distance learning students must be granted appropriate **access** to information materials;
- the IHS may need to develop its own licensing policy for obtaining access to different information resources;
- develop a distance-learning CD-ROM for each module or a combination thereof.

Conclusions on IHS library support to the distance-learning programmes of IHS

The main conclusions on IHS library support to the distance-learning programmes of IHS are:

- distance learning modules will require additional library information support beyond the content provided in the modules themselves;
- there will be a need for a closer working relationship between the library and instructors in order to develop appropriate information resources, be it in the form of an (electronic) reserve collection, an (electronic) Reader/course pack, or links to Internet resources)
- digital storage of information should be the norm (pdf format recommended)
- access to electronic journals should be institutionalised and means should be in place to get distance learners included under “authorised users”
- it may be necessary to develop some end user support on copyright issues and accessing electronic information
- the ACRL guidelines are a useful point of departure for the IHS library on the support it might want to give to distance learning students.

Recommendations on IHS library support to the distance-learning programmes of IHS

The main recommendations on IHS library support to the distance-learning programmes of IHS are:

- create, in liaison with IHS content experts, an electronic reserve collection using Readers/Course Packs as the point of departure;
- apply the ACRL guidelines to the IHS library, particularly on the following points:
 1. assess and articulate, on an ongoing basis, both the electronic and traditional library resource needs of the distance learning community, the services provided for them, including instruction, and the facilities utilised;

2. prepare a written profile of the distance learning community's information and skills needs;
 3. develop a written statement of immediate and long-range goals and objectives for distance learning; which addresses the needs and outlines the methods by which progress can be measured;
 4. encourage the incorporation of the distance learning mission statement, goals and objectives into those of the library and IHS as a whole;
 5. involve distance learning community representatives (administrators, faculty and students) in the formulation of objectives and the regular evaluation of their achievement;
 6. assess IHS library support for distance learning, its availability, appropriateness, and effectiveness, using qualitative, quantitative and outcomes measurement devices, as well as the written profile of needs;
 7. prepare and/or revise collection development and acquisition policies to reflect the profile of needs;
 8. participate with administrators and teaching faculty in the curriculum development process and in course planning for distance learning to ensure that appropriate library resources and services are available;
 9. promote library support services to the distant learning community;
 10. survey regularly distance learning library users to monitor and assess both appropriateness of their use of services and resources and the degree to which needs are being met and skills acquired;
 11. pursue, implement, and maintain all the preceding in the provision of a facilitating environment in support of teaching and learning, and in the acquisition of lifelong learning skills.
- improve access to (electronic) academic journals, and where possible ensure that distance learning students are recognised as "authorised users";
 - compile guidelines on copyright issues;
 - contribute towards the development of distance learning delivery by CD-ROM for students with poor Internet access.

Final Conclusion

Distance learning at the IHS can be seen as a part of a process of change management. It will be a long process, for which the IHS library is gearing itself up. The Housing Finance pilot project has been an opportunity for the author to consider the issues concerned from the perspective of the IHS library. In the context of the practical assignment for the IDM post-graduate study, it has been a good opportunity to focus attention on the issues that will need to be implemented in the next eighteen months, during the remainder of the TATE programme. Particularly important will be the transition from print to electronic information media for transmitting material to future distance learning students of the institute. That means that the library will need to work in closer co-operation with IHS content experts.

A tentative translation of what this means in terms of possible IHS library input into the TATE programme is that the following issues (in order of priority) need to be addressed:

1. the library needs to ensure that it gains access to as many (relevant) electronic journals as possible. (It should be noted that the content of Readers/Course Packs used in current IHS courses are for around two-thirds to three-quarters of their content based on journal articles);

2. the library needs to establish with the IHS IT department a clearly structured computer storage facility for distance learning electronic files (usually in PDF-format) which may need to be on a separate secure server;
3. the library needs to acquire appropriate skills for scanning book chapters and other materials that would also need to be incorporated into the proposed distance learning electronic information reserve. (Note: the head of the IHS IT department has already verbally agreed that a scanner in the IHS library would make good sense). However, it should be borne in mind that scanning is a time-consuming activity, and what this might mean for library staff time needs to be closely monitored;
4. the head of the IHS library needs to increase the dialogue with IHS content providers (lecturers who compile Readers/Course Packs) to ensure that all the appropriate (additional) reading materials will be made available electronically;
5. the head of the IHS library needs to incorporate the relevant parts of the ACRL guidelines into current IHS library practice;
6. the head of the IHS library should develop guidelines for IHS staff and students on “copyright issues”;
7. the issue of “electronic” image management within the IHS needs to be followed-up (an internal project proposal with the IHS Projects and Marketing Bureau is being developed now);
8. the library should also contribute to any experiments in developing a CD-ROM (using encryption techniques) that may need to be developed as an alternative delivery mechanism for students with inadequate Internet access.

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Appendix A Original (tentative) Proposals

IDM Practical Project – Status Update for Discussion

A pilot project involving the development of the Web Based Training (WBT) module on Housing Finance, started on 1st December 2000 at the Institute for Housing and Urban Development Studies (IHS) in Rotterdam.

This project is carried out in collaboration with Atos Origin and the Ministry of VROM, which also acts as the main financier. The pilot project is intended to run for 5 months until the end of April 2001.

Atos Origin

The aim of the pilot project, apart from generating a first marketable Distance Learning (DL)-module, is to get the staff of the Institute acquainted with the process of DL-implementation. The module will be based on an existing, mostly paper based IHS module on Housing Finance. Due to financial constraints the most important starting-point of the project is that the technical and graphical development of the WBT version of Housing Finance will be based on one of Atos Origin's formerly developed e-learning modules. Atos Origin's role is to re-design the materials, based upon the first analysis and based upon instructional design methodologies.

IHS Content

IHS delivers the content of the module. IHS content experts (Mike Lindfield and Michel Chrétien) will be the final editors of the content. Also IHS is responsible to edit the content from a 'cultural' point of view (Forbes Davidson).

Role of the IHS Library

The IHS library has a role in the project in the context of facilitating access to IHS database(s) particularly the main library database and an image database. In addition there will be a virtual reading room with access to other Internet-based resources. Next to these activities the library will also be responsible for dealing with any copyright issues that may need to be negotiated, either with producers of public domain information or for commercially published materials (including Journal articles). The module will also require material in the form of case studies to illustrate certain teaching points. Some of this material may be made available through the help of the IHS library and its copyright status needs to be verified.

Aim of IDM Practical Assignment

The aim of the IDM practical assignment will be to evaluate the Information Infrastructure required by IHS in the context of the provision of Web-Based Training. The pilot project on Housing Finance will be used as a case study, from which conclusions should be drawn for the future development of this form of training within the institute from the perspective of the ramifications for the IHS library.

Wider Scope Required

After the initial meetings that have taken place in the context of the pilot project on Housing Finance, **it is felt that the scope of the research needs to be extended beyond just describing the activities in the context of the Housing Finance module.** After discussion with IHS's deputy director, the following wider context issues were considered as possible areas for inclusion in the practical assignment in order to explore what the implications would be for subsequent distance learning modules that the IHS would like to develop:

- General consideration of Learning Management Systems (Blackboard; Lotus Learning ..., pros and cons)
- Copyright Issues relating to the Distance Learning modules (IHS staff, Public Domain, Commercial Publishers)
- Information Infrastructure in an on-line distance learning environment (seek practical examples) focusing on the place of relational databases in such environments
- Image management issues
- Extrapolation of lessons learned for to a planned Virtual Information Centre/Community that will focus on urban development themes that of interest to the IHS constituency

Tentative Report Structure

1. Introduction to Practical Assignment on Distance Learning
2. Context about the work of IHS
3. Short Case Study on the library's role in the Housing Finance distance learning Pilot Project with an explanation of why certain choices were made
4. Consideration of some Learning Management Systems
5. The current Information Infrastructure of IHS
6. Information Infrastructure needed in a distance learning environment (if possible seek examples where the role of relational databases is illustrated)
7. Image Management Issues (photos and videostreaming)*
8. Copyright issues (based on experience from the case study)
9. Wider application of distance learning lessons learned to a Virtual Information Centre/Community for the IHS constituency
10. Conclusions

* It has been assumed that bandwidth limitations in developing countries means that it is not (yet) practical to offer videos through the Internet to users of the initial distance learning modules but that may be possible in the future or by using alternative carriers such as CD-ROMs

Appendix 1 Library Deliverables in the Housing Finance Module

To date IHS library deliverables have been described as follows:

C. Relevant support material for the Housing Finance course

D. Tailored and more general information for the virtual library (“study room”)

A.: -select slides, mini-videos, graphs, charts that could be used during the course as example, or for exercises.

B: The virtual library has been defined as follows:

“The study room is a virtual space where the student has access to on-line libraries [a library in the U.S. could be here connected. I need confirmation], or to links to other relevant sources.

It is also meant as a library (container) in itself for PDF files (readers) that students can get from their coaches or by themselves, and a place to store their own works.

The integration of an intelligent search-engine might be of use here by selecting links to items that relate to questions, statements etc. present in the recent work of the students or teachers. It must also contain in a comprehensive way a list with recommended bibliography that can be modified only by the responsible co-ordinator.”

The elements that compose the library (types of documents and entries) are:

- Links to virtual libraries
- Links to on-line magazines
- Links to other relevant web sites
- Readers .pdf files
- Personal papers
- Bibliography lists (recommended reading) per course and teacher
- Search-engine (optional)
- Standards for writing papers (templates and parameters)

-make a list of links to virtual libraries (Erasmus, US?, maybe www.oup.uk/readingroom, etc.)

-select some relevant on-line magazines or magazines that might go on-line within soon

-link to the media (slides, photos) library of I.H.S.

-link to the hardcopy library (the classical one) of I.H.S.

-list of readers in .PDF format (digital anyhow) for HF course and the long-term program

-references lists per lector for their course (for the pilot HF I, eventually HF II)

-I.H.S. standards for the required papers: format, style, language standards, length (information in this sense)

-eventually examples of good papers etc. from students, model exercises

-any other suggestions?

Appendix 2 Original Proposal as submitted at the end of 2000

Preliminary Proposal for a Practical Assignment in the context of the IDM course

The Institute for Housing and Urban Studies (IHS) is an international education institute in the area of urban management. It intends to integrate “distance learning” in both its short and longer education programmes.

In order to obtain an idea of the implications of the introduction of distance learning, a pilot project is about to start. This pilot project will focus on an existing education programme (in a traditional format) which can then be developed into a module for distance learning. The project will, among other things, provide insight into the organisational, technical, cultural and didactical pre-conditions required for the successful implementation of distance learning.

IHS wishes to shape distance learning within the Institute at the earliest opportunity. The pilot project is the first step in the implementation of “Web-based training” within the IHS.

Aim of Pilot Project

By developing a pilot project, it is hoped that it will become clear what possibilities “web based training” has to offer to the IHS without leading directly to radical changes in terms of the existing education programme and organisation. The pilot project will also mean a rapid initiation of distance learning.

A project plan already exists with phases, planning and (technical) partners, and (provisional) funding.

IHS will be involved in providing the **content** for the distance learning module.

IHS Library

As part of the IHS content contribution, the current head of the IHS library will also be an active member of that team (which will work together on the pilot project) to create the new “distance learning” module.

Issues

The practical assignment will focus *on the library’s role in the provision and presentation of information as part of the IHS contribution to the new distance learning module*, through the experience gained during the pilot-project.

It will be a description of the pilot project as it has been planned, it’s (forthcoming) implementation, and the practical problems that arise, from the perspective of providing (web-based) information in a distance learning context.

IHS counsellor:

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NB: The final product will be in English

Annex B The TATE (Technology-Assisted Training and Education) Programme proposal

INNOVATION IN TRAINING & EDUCATION – CAPACITY BUILDING IN A NEW JACKET

The TATE (Technology-Assisted Training and Education) Program
Institute for Housing and Urban Development Studies (IHS)

Introduction

For decades, the IHS has been involved in capacity building in the areas of Housing, Urban Management, and Urban Environmental Management, for individual, mid-career professionals from developing countries and countries in transition, as well as for institutions in those same regions. Thanks to the support of the Netherlands Government, these activities have long been possible on a cost-recovery basis. Over the past few years, however, it has become increasingly clear that at least some of the Institute's educational and training activities can no longer be financed in the old-fashioned way, i.e., by virtue of the availability of Government subsidies in the form of fellowships (NFP, Netherlands Fellowship Programme). Contributions by foreign participants themselves, either out-of-their-own-pocket or through sponsoring, are insufficient, and – above all – unpredictable after a package of training/education has been put onto the market. Prices for training and education calculated on a real cost basis, are high – if not prohibitive – for customers from the target countries. Moreover, their temporary transferral to The Netherlands often creates additional difficulties, in that they temporarily leave jobs and (often) families behind. Information from IHS regional offices, projects, alumni associations, and competitors strongly suggest that the global market for IHS' educational products is probably much larger than what is currently seen translated into numbers of students actually participating in the Institute's training & educational activities in Rotterdam.

Current Training and Educational Package

Roughly speaking, the training and educational activities of the Institute in Rotterdam can be divided in 2 distinct categories; (i) short courses and (ii) masters' courses. The short courses comprise: a. regular short courses (usually 3 months in duration) on "classic" topics within the Institute's area of expertise; b. tailor-made courses (courses put together upon specific, topic-related request); and c. refresher courses. The masters' courses are 16-18 months in duration and are given in collaboration with universities and/or other institutes for international education. All courses are currently given using proven, rather classic, interactive face-to-face teaching methods (i.e., classroom lecturing, group workshops, group field trips, etc.).

The Nature of TATE

Technology-Assisted Training and Education is characterized by its use of modern Information and Communication Technologies (ICT) to deliver knowledge and get a feedback on it.

A Rationale for TATE

The arsenal of methodologies and technologies available for utilization in training and education is vast and continuously increasing. Teachers and instructors in the fields of higher education have trouble keeping up with the developments. This has less to do with computer literacy than with keeping up with altering conceptual attitudes towards the life-long process of learning and the continuously changing methodologies used for knowledge transfer, and is exemplified by the rapid growth of (often commercial) organizations dealing with knowledge management.

Institutions like the IHS traditionally cover a heterogeneous and volatile segment of the educational market. This fact precludes the use of a uniform recipe for improving the efficacy and spread of its knowledge transfer. For efficiency reasons, however, a certain degree of standardization is necessary.

For instance, practical urban management in a mountain community in the Andes may be different from that in, say, a port city in China. The researched and accepted scientific and empirical principles and methods of good general urban management will apply in both locations, though. On the other hand, the jacket (or, interface) worn by this kind of “universal” knowledge may be different in two geographically and/or culturally different places. Likewise, the pre-existing educational level of those desiring access to new knowledge may be widely different. The IHS considers it its task to make knowledge in the areas of its expertise available to all who desire it AND have the necessary background to be able to appropriate such knowledge. In doing so, the Institute has to maintain relative and absolute quality criteria. In practice, that often comes down to “pruning at the entrance”; candidates may get turned down because of, e.g., insufficient knowledge of the English language. It also harbors the danger of the Institute becoming too indiscriminate in allowing participants in when it is financially pressed for the revenue.

With regard to the nature of the Institute’s training and education it should be emphasized that this has an academic as well as an applied-practical side to it. Unlike a university, the IHS provides for a good deal of practice-based knowledge, mixed carefully with rather theoretical, academic components. This makes it difficult for the Institute to – a priori - simply line up with a university when it comes to introducing ICT-supported modalities into the training and educational product.

The introduction of TATE into the Institute’s training & educational package will have a number of obvious advantages:

1. Knowledge can be made available at great geographical distance. This so-called “*distance learning*” includes web-based training (WBT) with various degrees of interactivity, the shipping out of “canned” educational material in audio-visual carrier format (CD-ROMs, DVDs, etc.), videoconferencing, internet-relayed audio-visual streaming, etc.
2. Carefully designed and located *virtual communities* will promote communications with regard to the knowledge-transfer process (in both directions)
3. All-out *modularization* of training and education becomes forced; if all of the Institute’s training and education – in principle – has to be adaptable to a TATE-format, then modularization has to be carried through to the limit. In addition, modules need to be exchangeable across different courses and have an intrinsic credit and time value
4. The TATE-approach allows the introduction of “*fringe*” *modules* for adequate preparation for the real course modules, e.g., a “brush-up” course in English, in computer skills, etc.
5. The intrinsically more standardized format of TATE makes *quality* assessment (QA) and quality management (QM) more amenable and imparts greater statistical value to them
6. From an economical point of view, TATE is characterized by a relatively high up-front investment, but also by relatively low throughput (updating and maintenance) costs; this frees up staff time for original *research* which, i.a., boosts the actuality content of training and education, as well as intensified *market exploration*

The degree to which modern ICT commodities are available in developing countries varies greatly with the region. Standalone computers capable of reading out CD-ROM’s or DVD’s are quite ubiquitous or – otherwise - easily acquired, as is audio and video playback equipment. This is especially the case for the Institute’s target group, mid-career professionals. Much in contrast, reliable internet connections, by virtue of dependable fixed or mobile telephone networks, are sometimes hard to find. However, even in developing countries there is a steady improvement in the quality and extension of telecommunication systems, most certainly in the more urbanized regions. Recently, the World Bank Institute, in the framework of its own global interconnectivity initiative, has been placing and putting

into operation modern, high-capacity satellite-relay communication hubs in a number of major urban centers throughout the developing world. Many more are planned for the immediate future. Despite such developments, the technology needed to absorb TATE is not available yet on every street corner in developing countries. In order to achieve an as optimal as possible distribution of its TATE products, the IHS must make them available through local institutions (universities, schools, hospitals, city halls, public libraries, etc.) and offer them in a technologically sophisticated (e.g., web-based) as well as in a more “simple” (e.g., as videotapes or CD-ROM’s) form. In any case, it can be safely stated that the use of TATE products is in general much cheaper and less disruptive for the customer in a developing country than coming to work and live in Rotterdam for any extended period of time.

The Transition Period

It is quite obvious that the Institute cannot switch from the existing training and educational system to a full TATE variant from one moment to another. The challenge will be contained in gradually but persistently introducing TATE while keeping the existing *system* as operational as possible. This does not mean that non-profitable training and educational activities might not be abandoned early on. On the contrary, certain short courses, like the ICHUD, are up for review immediately, with special attention to their possible suitability to be re-cast into a TATE-format.

As far as the ICHUD courses are concerned, some clarifications need to be given. For some elusive reason, the interest of mid-career professionals in participating in the 3-month ICHUD courses is less than expected, based on the interest of the same customers in the Master’s courses (almost all ICHUD specialization modules also figure in the Master’s program). One important reason for this discrepancy may be that a Master’s course leads to a formal degree (M.A. or M.Sc.) whereas a short course is concluded with a diploma that has the character of a certificate-of-attendance. Another reason may be that the ratio of introductory material (often experienced as “boring” or redundant by some participants but not all) over specialized matter is relatively high in a short course, when compared to a Master’s course. Efficient cross-modularization, in combination with an appropriate, time-validity-limited cross-crediting system, between short courses and Master’s programs might very well boost the interest in short courses. The use of TATE, to minimize the duration of physical presence in Rotterdam and to keep the amount of introductory material tailored to fit individual needs rather than those of an entire group of participants, may then just tip the balance towards survival (including a modest profitability) of the 3-month courses. It should also be kept in mind that with the application of TATE, significantly higher student-to-teacher ratios (currently physically constrained to approximately 20:1) can be achieved. Interestingly, the relationship between profitability and student-to-teacher ratio is much less pronounced in TATE than it is in the more classic (contact) forms of training and education.

The main process that has to start soon is getting the teaching staff (and teaching support staff) acquainted thoroughly with TATE design and implementation. Trainers and teachers will have to get hands-on experience with what it takes to convert knowledge in a classic form into knowledge in a TATE jacket. For this purpose the IHS will carry out, in collaboration with Origin Nederland B.V. and the Ministry of VROM, a pilot *distance learning* project. This project is aimed at re-designing and re-shaping an existing module, Housing Finance, which is centrally located in the Masters’ Course on Urban Housing Management (UHM), and also figures as a specialization module in the 79th ICHUD regular short course, into TATE format. The project will be subsidized by the Ministry of VROM and is scheduled to run between Dec. 1, 2000 and May 1, 2001. The deliverables of this project will include, apart from a distance learning module itself, a script-wise plan-of-action for generating

additional distance learning modules. It is envisioned that the TATE program effectively starts on Jan. 1, 2001, and uses the aforementioned pilot project as a kick-off. In order to generate sufficient critical mass, the TATE program will have to be manned with 6 f.t.e. staff who are skilled in content (IHS' field of expertise), graphical and interface design, educational science, computer programming, the professional use of audio-visual equipment, etc., and must be kept running at initial burst speed for at least 2 years.

Parallel to the development of distance learning modules, the construction of at least one, fully functional, *Virtual Information Community (VIC)* has to be carried out. Among the "founding" members of this VIC will be: IHS Rotterdam course participants and teaching and teaching support staff, IHS Regional Offices staff, training and education staff of collaborating institutes, and IHS Alumni Associations. The VIC may extend its architecture and functionality so as to accommodate external members, such as Government institutions, NGOs, large, multi-national donor organizations, as well as individual professionals. The VIC will serve as an interactive hub for the exchange of information between students and non-student experts in the areas of IHS' expertise. As such, it will also contain channels dedicated to the direct and indirect feedback on TATE. Hence, TATE and the VIC are interlinked. In addition, the VIC may be used for market exploration and marketing purposes vis-à-vis the Institute's TATE products.

Towards an Operational Plan

As is mentioned above, the TATE Program is preceded by a header (pilot) distance learning project on "Housing Finance (DL-HF)". The DL-HF project will start on Dec.1, 2000, and will yield an analysis/design, comparable to a "story board" about two months later. The TATE Program will use the outline of this story board to arrive at its own detailed operational plan by about March 1, 2001. The slightly (1 month) running out-of-phase of the TATE Program with respect to the DL-HF project will ensure that the former fully utilizes the progress of the latter. Within the TATE Program, the Master's course on Urban Housing Management will be taken on first. The analysis and design of this course with regard to TATE elements should also be completed by April 1, 2001. By July 1, 2001, two short courses from the ICHUD series will start to be subjected to the same procedure. During the 2nd year of the Program, 2 more complete Master's courses (Urban Environmental Management and Urban Management) and 4 more regular short courses from the ICHUD series will be TATE-enabled. The creation of the VIC within the framework of the TATE Program is initially a rather separate activity and should be completed within the first 2 months.

As far as the DL-component of the TATE Program is concerned, the turnaround activities (per module) consist of:

PhaseMonth	X	X + 1	X + 2	X + 3	X + 4	X + 5
Preparation						
Analysis						
Design						
Execution						
Test & Acceptance						
Implementation & Product Evaluation						
Follow-up Workshop						

Depending on the complexity of the module under scrutiny, the preparatory phase may vary in duration.

A comprehensive time schedule for the entire TATE Program, in which each time bar represents an activity package as depicted above, is given below:

	Year 1 (2001)		Year 2 (2002)	
Completion of Detailed TATE Plan				
VIC Development				
UHM Masters				
ICHUD module 2				
ICHUD module 3				
CUE Masters				
UMC Masters				
ICHUD module 4				
ICHUD module 5				
ICHUD module 6				
ICHUD module 7				

N.B. ICHUD module 1 is the Housing Finance module developed in the header pilot project

It is emphasized that in carrying out the TATE Program, a great deal of hands-on experience must be gained. Presently, good working knowledge of the different elements of TATE is limited within the Institute. However, the DL-HF pilot project will be carried out together with experts from Origin Nederland B.V. who have ample experience in this area. By having them teamed up with IHS staff during the entire pilot project, a certain transfer of appropriate working knowledge to IHS staff seems assured.

The 3 Masters' courses and the 7 ICHUD modules scheduled above are not the only IHS training & education elements to be "TATE-ized". Also refresher courses, tailor-made courses, (new) 3-4 week summer courses, and "fringe" modules will be investigated with regard to their potential suitability for being cast into a TATE-format. Since such courses generally are cost-covering or profitable to some degree, their adaptation to TATE can be considered less urgent. Nevertheless, as soon as the TATE Program has formally started, any ideas for new courses will be carefully checked for their TATE-adaptability.

The fact that a training/educational activity is cast into a TATE-jacket does not automatically imply that it can be participated in exclusively and entirely from a distance. However, the physical "contact" time between teacher/trainer and student/participant can be greatly reduced, resulting in a potentially large reduction in cost and an increase in the number of students who can actually access the knowledge.

Staffing and Costs of the TATE Program

The execution of the TATE Program requires a dedicated, professional team, made up of experts in various fields. The team must be able to work on the Program continuously for a period of 2 years, and thereafter become either a permanent unit within the IHS or – if leaving the Institute – have sufficiently transferred skills and expertise to existing staff within the Institute to warrant

implementation and maintenance of TATE upon formal termination of the Program. It has, therefore, been decided to let existing, permanent staff play a prominent role in the TATE Program team. The following table provides an overview of the composition and salary/fee costs of the Program team:

Team member	f.t.e	Months	Cost/yr x Dfl. 1.000	Fee/mo x Dfl. 1.000	Total cost/yr x Dfl. 1.000
Program leader/education scientist	1.0	N/A	130	N/A	130
Graphics/Interface designer	1.0	N/A	130	N/A	130
Technical expert*	0.4	N/A	90	N/A	36
Junior professional*	0.8	N/A	90	N/A	72
Junior professional*	0.8	N/A	90	N/A	72
Senior professional*	N/A	2	N/A	30	60
Senior professional*	N/A	2	N/A	30	60
			Total team cost/yr: Dfl. 560.000,-		

*the team members denoted by an asterisk are existing IHS staff; the professionals are content experts

The IHS' Deputy Director will act as the responsible, overall Program Co-ordinator and budget holder. It should be emphasized that other, professional IHS staff will be called upon to put varying amounts of non-billable time into the Program. As there is presently no good estimate as to how much time this will be, the related, pro-forma costs are left out of the table. The costs of investment and operating expenses are summed up in the next table:

Other expenses (in Dfl. X 1.000)	Year 1	Year 2
Investments		
- dedicated servers (2)	25	12.5*
- various computers and peripherals	50	25*
Operating expenses		
- development/production VIC + DL	250	200
- portal rental	80	160
- out-of-pocket	25	25
- miscellaneous**	50	50
Total other expenses (in Dfl X 1.000)	480	472.5

* depreciation has been taken as 50% per year

**miscellaneous includes travel, congresses, etc.

The total costs can be derived from the tables displayed above, and amount to:

Year 1: Dfl. 1.040.000,-
Year 2: Dfl. 1.032.500,-

The expensed to be incurred in year 1 can almost entirely be defrayed by the investment impulse subsidy supplied by the Netherlands Ministry of Foreign Affairs/Development Co-operation. In order to be able to pay for the costs to be run up in year 2, other funding resources will have to be located and secured. In this context, the IHS is actively approaching the Development Corporation of the City of Rotterdam (Ontwikkelings Bedrijf Rotterdam, OBR), the Ministry of Education, Culture, and Sciences (OC&W), as well as a fleet of national and international organizations that might be willing to fund (or match-fund) projects at the interface of ICT and education/training.

Program Deliverables

Calibration points during the execution of the TATE Program will be characterized by clearly defined deliverables. A detailed list thereof, as well as their position in time, will be contained in the detailed TATE Plan (due by March 1, 2001). Apart from (parts of) courses in TATE format, deliverables will consist of documentation, manuals, workshop proceedings, etc. It is important to stress here, that TATE products will, wherever possible and or/desirable, be made available in multiple subformats, e.g. web-based, mixed web-based/physical carrier-based, or merely physical carrier-based. Although all TATE-material to be developed will be AICC-compliant (i.e., fitting into all known ICT-supported learning platforms), customer user restrictions, especially in remote developing areas, may preclude the use of web-based material, and, instead, call for physical carrier-based subformats, such as DVD's, CD-ROM's, and audio-visual tapes.

Throughout the Program's course, the Program team will provide training sessions and material to IHS teaching and teaching support staff. The Institute's Projects, Courses, and Marketing Support Bureau will lock into the Program early on with a thorough market exploration for TATE products and gradually develop an accordingly appropriate marketing strategy.

TATE in a Larger Environment

Of course the IHS is not alone in its ambitions to introduce TATE activities into its curriculum. Throughout the Program and beyond the IHS will try to establish/re-inforce links of mutual benefit with a plethora of other educational institutions, NGO's, multi-national governmental organizations, educational networks, etc. It is interesting to note that the IHS recently has become a partner in a USAID-funded project aimed at providing DL-training in local administration management to 110 districts in Ghana, as a partner of the Institute of Local Government Studies in Accra, Ghana, and the University of Delaware in the U.S.

Annex C ScienceDirect Web editions – completed online license agreement

Annex D ACRL Guidelines for Distance Learning Library Services