A Union Catalog for Networked Digital Library for Theses and Dissertations – An Update

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About VTLS Inc

- First spin-off corporation at Virginia Tech (Virginia Polytechnic Institute & State University) – Virginia's largest University
- Anchor tenant in VA Tech Research Park (1987)
- VTLS has offices in 6 countries & agents in 12
- VTLS does business in 32 countries
- More than 100 employees in Blacksburg
- Business integrated library systems;
 - digital libraries and
 - RFID technology for libraries



VTLS Inc. Corporate Offices

- Blacksburg, Virginia, USA
- Barcelona, Spain
- Kraków, Poland
- Kuala Lumpur, Malaysia
- New Delhi, India
- Rio de Janeiro, Brazil
- Martigny, Switzerland

VTLS Inc. Corporate Headquarters



VTLS Inc. International Partner Locations

- Australia
- Egypt
- Germany
- Greece
- Kuwait
- Malaysia

- Philippines
- Singapore
- Slovakia
- Switzerland
- Taiwan
- Thailand

VTLS Products

- ISO 9001 registered company
- VTLS Old Product Line No longer sold; but supported
 - VTLS-2001
 - Micro-VTLS
- VTLS New Product Line
 - VIRTUA ILS (Integrated Library Systems)
 - VISUAL MIS (Multimedia and Imaging Solutions)

Virtua

Vista

VISTA CPS (Companion Product Suite)

A Union Catalog for NDLTD Goals

- Create a global union catalog of all theses and dissertations for NDLTD members and others.
- Provide a single location for searching ETDs
- Single searchable database for ETDs in all languages (Made possible thru Unicode.)
- Participating Institutions will provide metadata for the union catalog with a link (URL) to their Electronic Theses and Dissertations (ETDs).
- Institutions will host their own ETDs.

Goals

- Ana Pavani said
 "In order to be read you have to be found"
- That is exactly the goal of the Union Catalog to allow you to find theses and dissertations from any institution, in any language from any location.

A Union Catalog for NDLTD Union Catalog Agency

- Union Catalog Agency will
 - host the union catalog
 - store the original submission
 - convert submitted data
 - to Unicode
 - to standardized format for loading
 - create database
 - create search indexes for database
 - provide web based client to access database
 - provide Z39.50 server support for database
- NDLTD Steering Committee decided that VTLS Inc. will act as the Union Catalog Agency for NDLTD

A Union Catalog for NDLTD Creating the Database

- Participating Institutions will submit their metadata on ETDs to the Union Catalog Agency
- Metadata may be submitted (or Harvested using OAI) in
 - Marc Format
 - Dublin Core
 - A DDT for ETD
- Use Open Archives where ever possible
- Each submission should have a locally assigned object identifier (to allow updates to the database)

A Union Catalog for NDLTD User Functions

- Search Union Catalog
 - Authors/creators
 - Committee members
 - Titles
 - Institutions/Departments
 - Subjects
 - Keywords
 - Words in Abstract
 - Language of ETD
- Select the TD of interest
- Navigate to ETD (or to the Institution)
- Download read/view ETD from Institutions

A Union Catalog for NDLTD Maintaining the Catalog

- Distributed Online maintenance
- Periodic submissions of new data from participating institutions
 - How often? Once a semester?
 - FTP or harvesting?
- Updating of existing records in batch
 - error corrections
 - new keywords or subjects

Submit and Store Formats

- Data may be submitted or harvested in any "reasonable" format. Have received data in
 - MARC21, USMARC, UNIMARC, RDF, UKMARC
- Can receive data in
 - Dublin Core or any XML based format.
- Store original record in submission format
 - To allow for easy updating
- Searchable record is in MARC21 format
- Transparent to user

A Union Catalog for NDLTD Implementation Status

- Originally Project had three phases
 - Phase 1: Pilot Project
 - Phase 2: Test project
 - Phase 3: Go Live
- All Phases are now complete
- The Union Catalog is available **FREE** at

http://www.vtls.com/ndltd

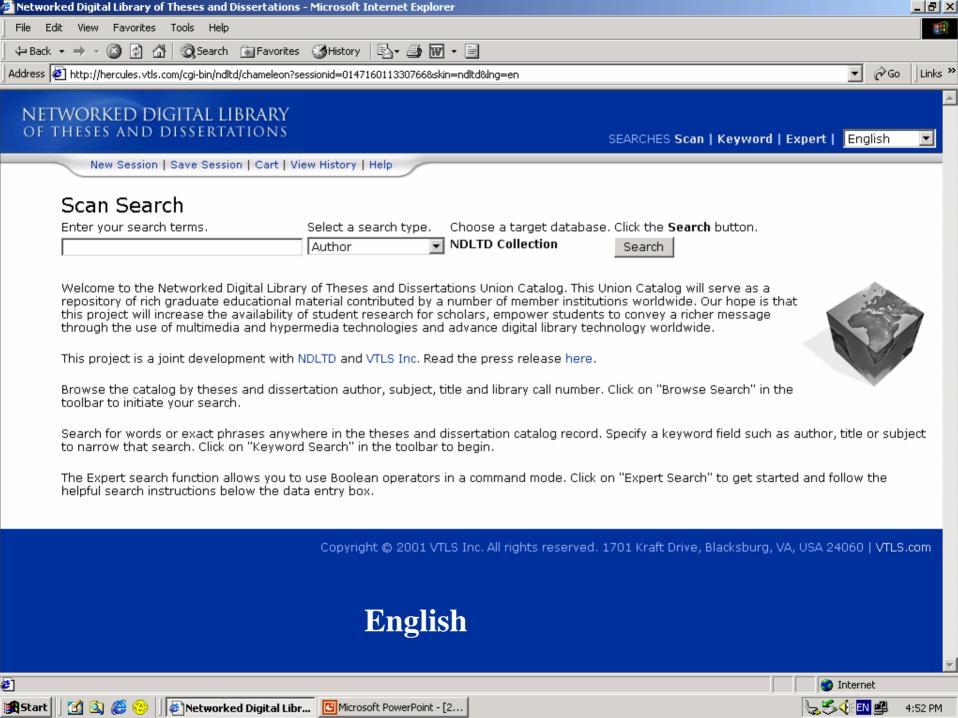
User interface is being constantly refined and new search types are being added based on feedback received from users.

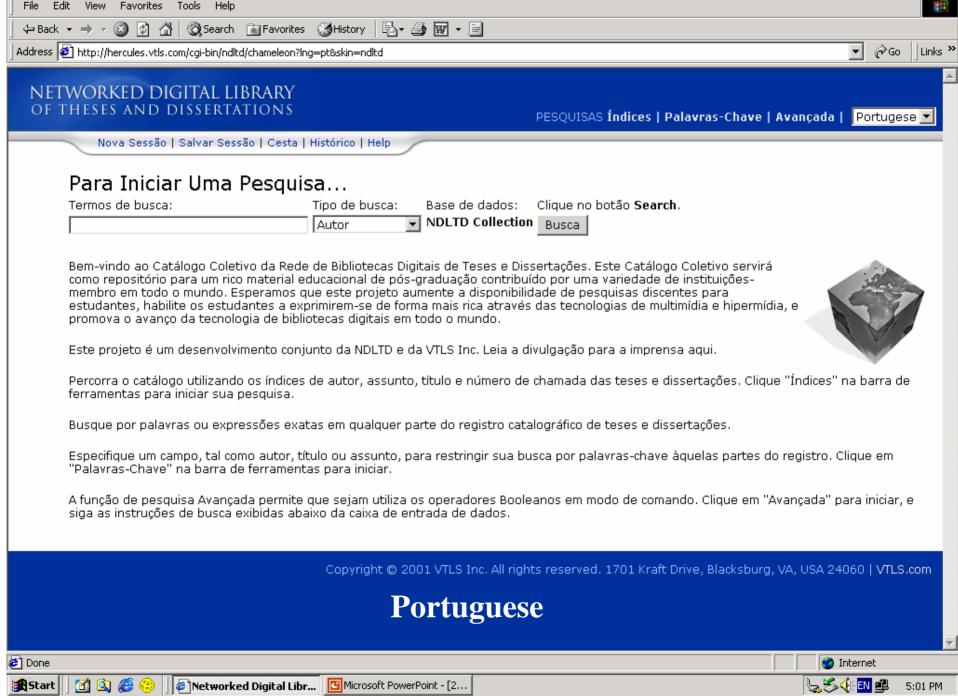
NDLTD Union Catalog Statistics 1. Participating Countries

- So far ETDs from 7 countries are included in the database.
 - Canada
 - Germany
 - Greece
 - Korea
 - Portugal
 - Spain
 - U.S.
- UK to be added by June 30, 2002.
- Brazil to be added soon.

NDLTD Union Catalog Statistics 2. Interface Languages in Union Catalog

- The language here is the language of the interface
- The VTLS NDLTD Union Catalog has 14 languages:
 - English, Arabic, Catalan, Chinese
 - French, German, Hebrew, Korean
 - Polish, Portuguese, Russian, Slovak
 - Spanish and Swedish
- Examples follow





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Networked Digital Library of Theses and Dissertations - Microsoft Internet Explorer



Um eine Suche zu starten...

Geben Sie Ihre Suchbegriffe ein.	Wählen Sie eine S	uchkategorie	. Wählen Sie eine Zieldatenbank.	Klicken Sie auf den Knopf Suchen .
	Author	▼	NDLTD Collection	Search

Willkommen im Networked Digital Library of Theses and Dissertations Union Catalog. Dieser Gesamtkatalog wird als Depot für pädagogische Materialien von Akademiker/innen dienen; die Beiträge stammen von zahlreichen Mitgliedsinstitutionen weltweit. Wir hoffen, dass dieses Projekt den Studenten die Verfügbarkeit von Forschungsdokumenten erleichtert, dass es ihnen erlaubt, dank den Multimedia- und Hypermediatechnologien reichere Informationen zu übermitteln, und dass es die Technologie der digitalen Bibliothek weltweit entwickelt.



Dieses Projekt wird gemeinsam von NDLTD und VTLS Inc entwickelt. Lesen Sie die Pressemitteilung hier.

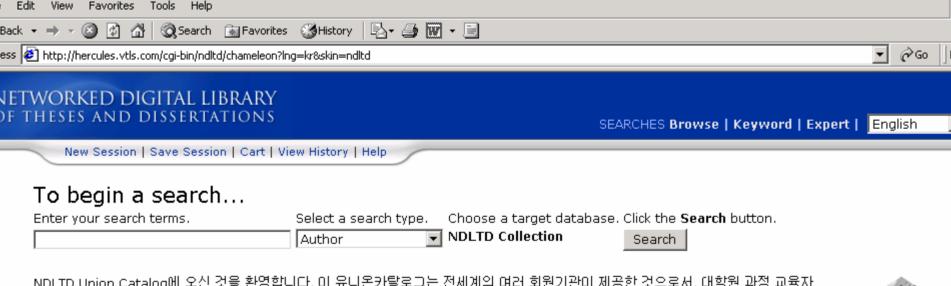
Blättern Sie im Katalog nach Autor, Thema, Titel und Signatur einer Dissertation. Klicken Sie auf die Suchart "Blättern" in der Auswahlleiste, um Ihre Suche zu beginnen.

Suchen Sie nach Begriffen oder genauen Sätzen in der Katalogaufnahme einer Dissertation. Geben Sie eine Suchkategorie ein, z.B. Autor, Titel oder Thema, um Ihre Suche einzuschränken. Klicken Sie auf die Suchart "Stichwort" in der Auswahlleiste, um Ihre Suche zu beginnen.

Mit der Expertensuche können Sie Bool'sche Operatoren im Befehlsmodus anwenden. Klicken Sie auf die Suchart "Experte", um Ihre Suche zu beginnen, und folgen Sie den Anweisungen unter dem Eingabefeld.

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German

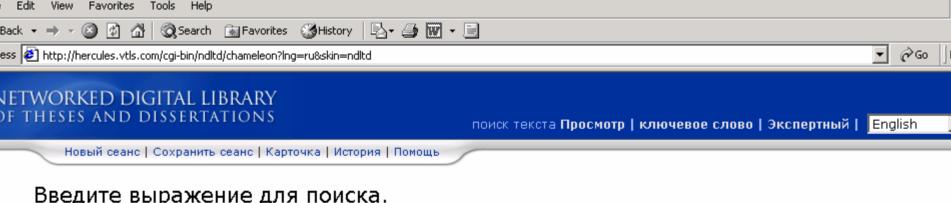


NDLTD Union Catalog에 오신 것을 환영합니다. 이 유니온카탈로그는 전세계의 여러 회원기관이 제공한 것으로서, 대학원 과정 교육자료의 풍부한 자료원으로 활용될 수 있습니다. 멀티미디어와 하이퍼미디어의 기술 및 전세계의 진보된 디지털도서관 기술을 이용함으로써, 우리는 학생들의 학문적 연구의 역량을 높여주고, 그들이 훌륭한 논문을 쓸 수 있기를 희망합니다. 학위논문의 저자, 주제, 제목, 청구번호 목록으로 검색할 경우에는, 회색 도구상자에서 "Browse Search" 단추를 클릭하여 검색을 시작하십시오. 학위논문 목록에서 정확하게 일치하는 단어나 어구로 검색할 경우에는, 검색 범위를 좁혀서 저자, 제목, 주제 등과 같은 키워드 항목을 지정하고, 회색 도구상자에서 "Keyword Search" 단추를 클릭하여 검색을 시작하십시오. 전문적 검색의 경우에는, 논리연산 명령문을 사용할 수 있습니다. "Expert Search" 단추를 클릭하여 전문적 검색을 시작하고, 데이터 입력상자 밑에 있는 검색 도움말의 지시를 따르십시오.



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Korean



Введите выражение для поиска.

Выберите тип поиска.	Выберите тип поиска	а. Выберите БД для поиска.	Нажмите кнопку Поиск.
	Author	NDLTD Collection	Search

Добро пожаловать в объединенный каталог тезисов и диссертаций Сетевой Библиотеки Цифровых технологий. Этот объединенный каталог будет служить как богатое хранилище образовательного материала дипломированных специалистов, пожертвованный множеством членов учреждений во всем мире. Мы надеемся, что этот проект увеличит доступность исследований студентов для ученых, уполномочит студентов передавать более богатые сообщения с помощью мультимедиа и технологий гипермедиа и продвигать цифровую технологию библиотеки во всем мире.



Этот проект - совместное решение NDLTD и VTLS компаний. Читайте официальное сообщение для печати здесь.

Найдите в каталоге тезисы и диссертации, используя тип поиска по автору, предмету, названию и расстановочному шифру библиотеки. Нажмите на "Поиск " в панели инструментов, чтобы начать поиск.

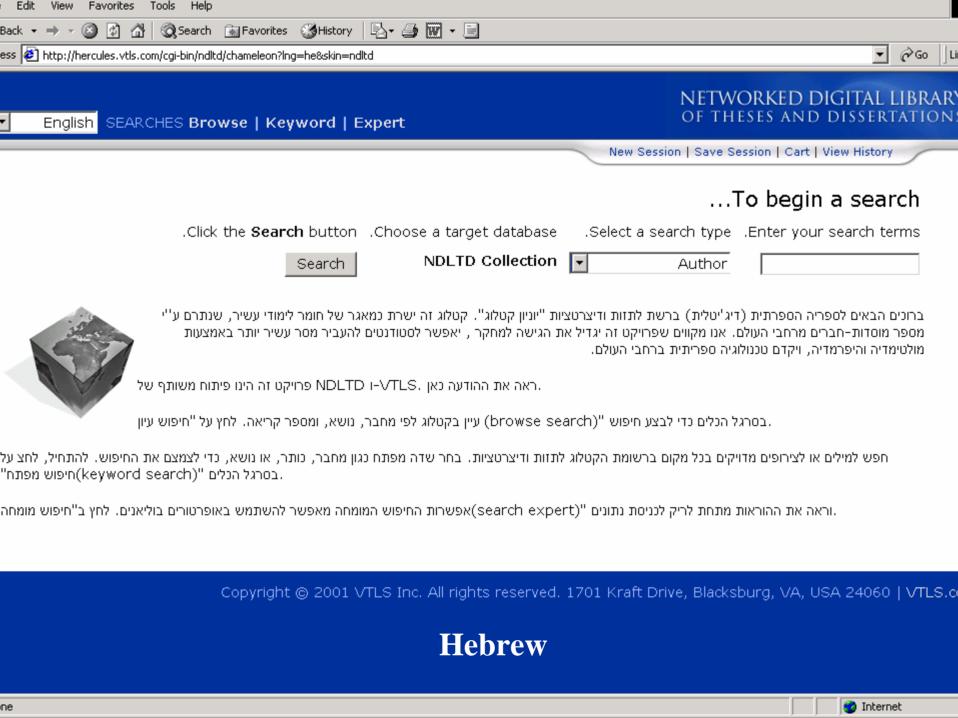
Можно провести поиск в записях каталога по слову или целой фразе из тезисов и диссертаций. Определите в поле поиска по ключевому слову тип: автор, название или предмет, чтобы сузить поиск. Нажмите по "Поиск по ключевым словам" в панели инструментов, чтобы начать.

Функция экспертного п

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Russian

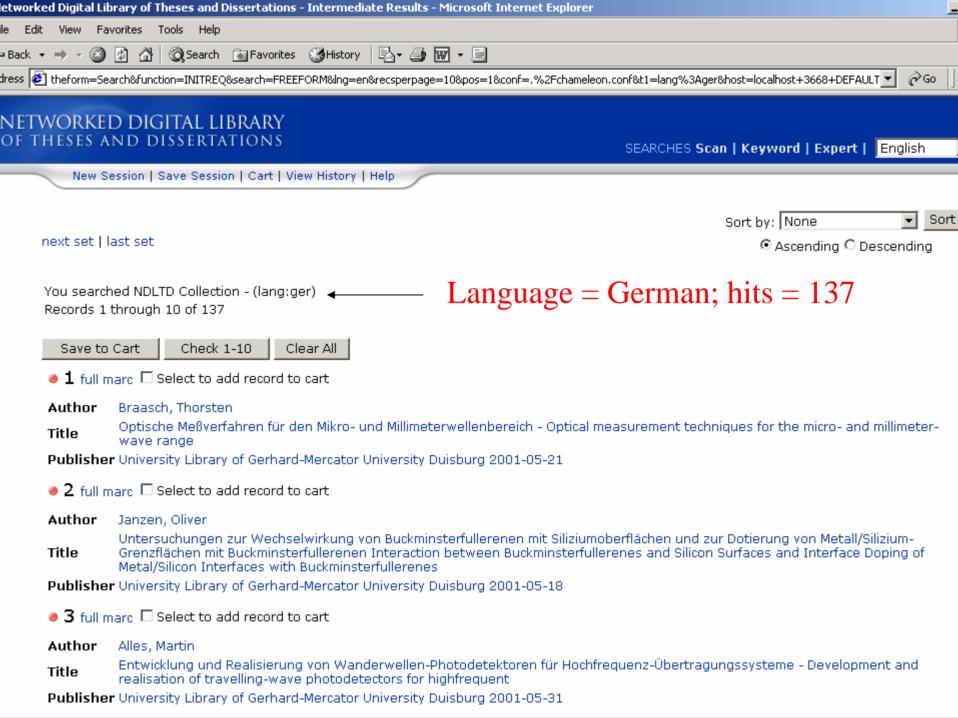


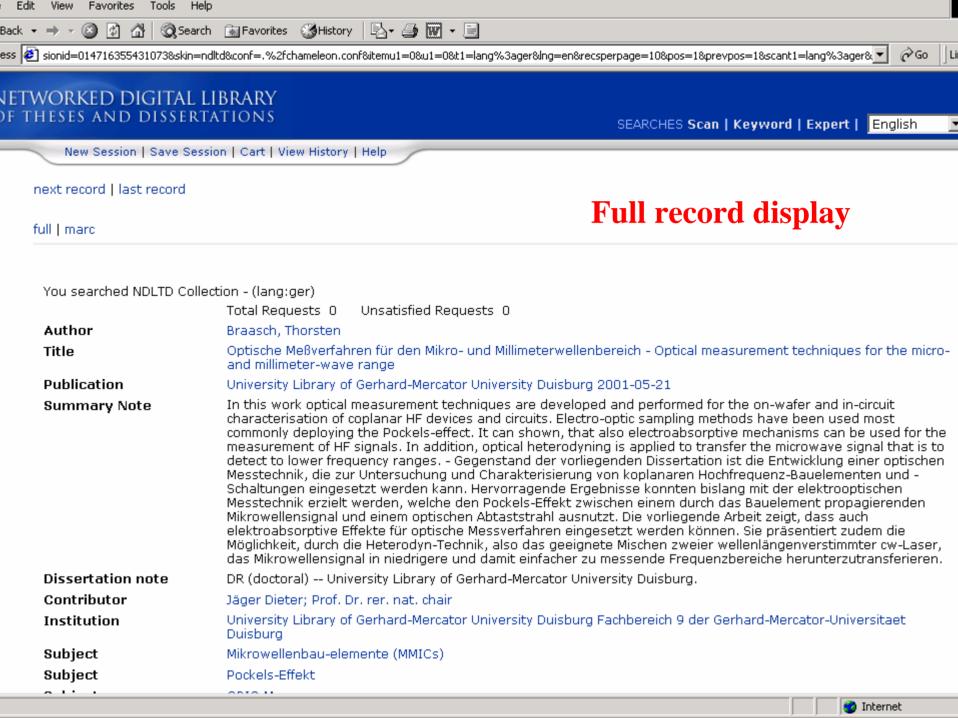


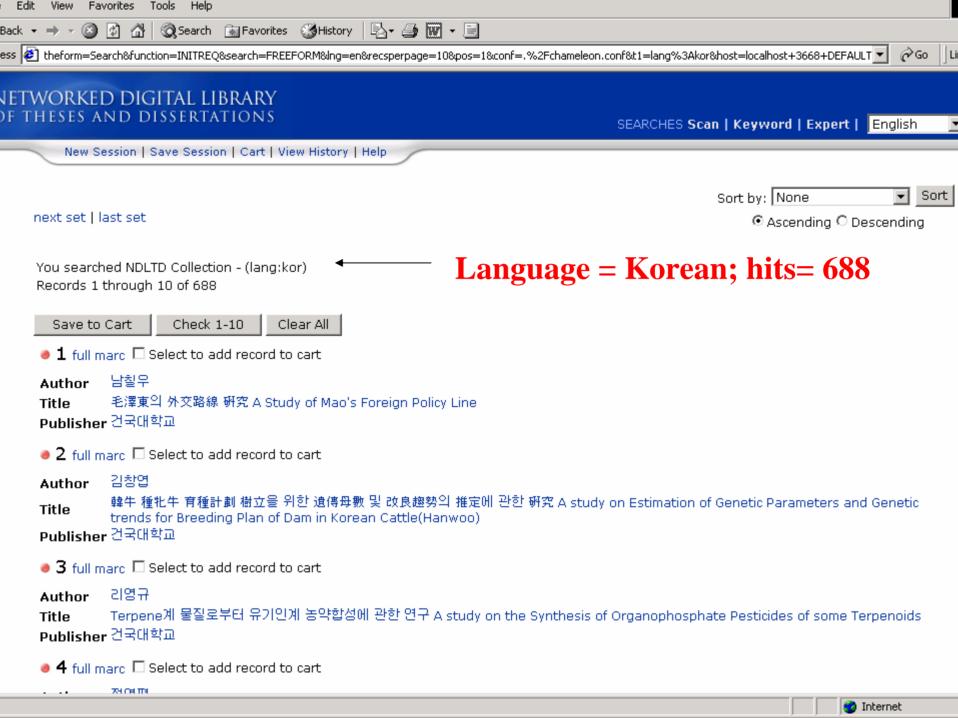


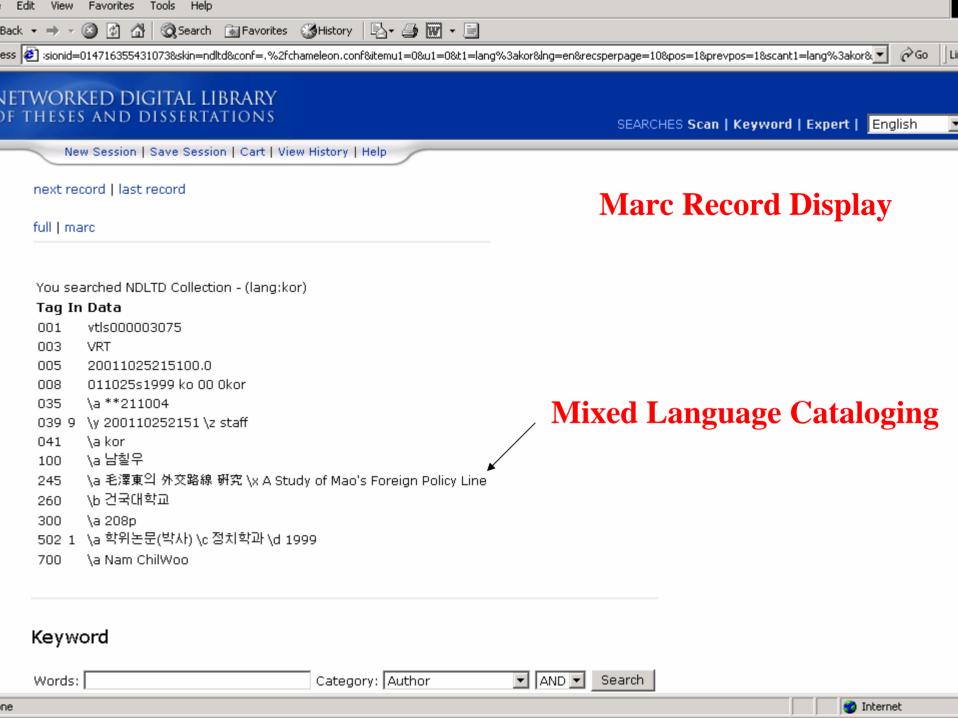
NDLTD Union Catalog Statistics 3. Languages in the Union Catalog

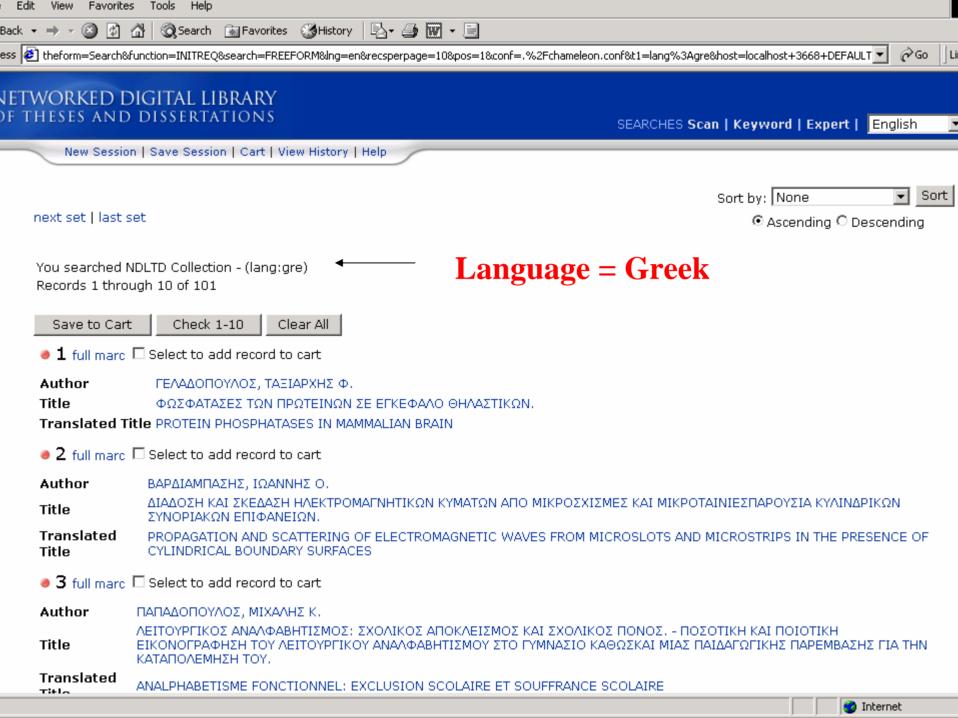
- The language here is the language of the content of ETD
- The VTLS NDLTD Union Catalog has data in 6 different languages. These are:
 - English
 - German
 - Greek
 - Korean
 - Portuguese
 - Spanish
- Examples follow

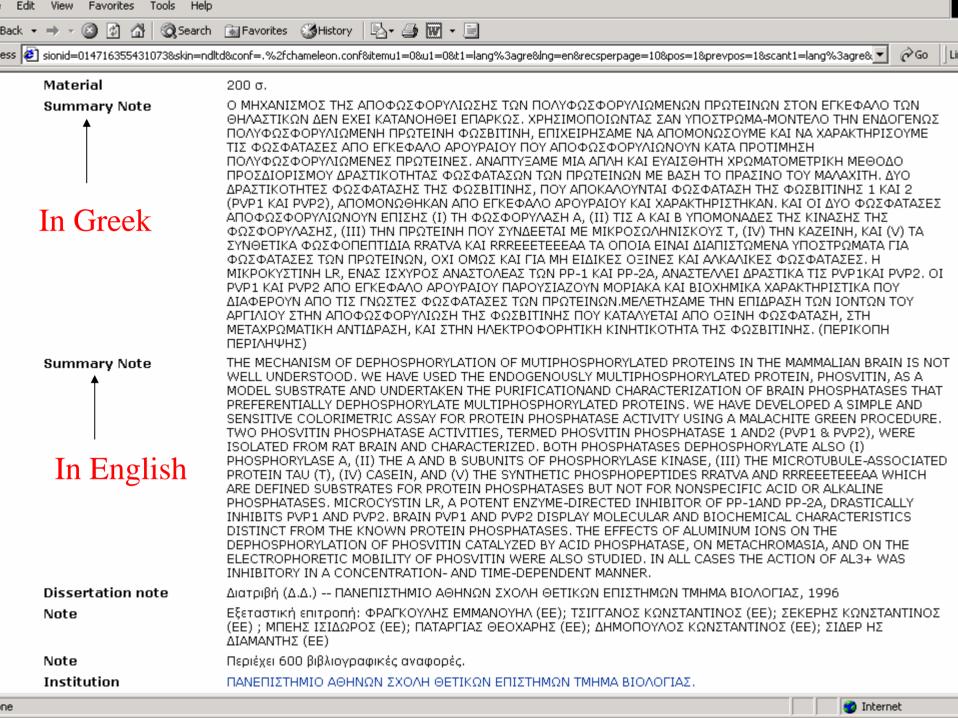












NDLTD Union Catalog Statistics 4. Partial List of Institutions in the Union Catalog

- Konkuk University (Korea)
- University of British Columbia (Canada)
- University of Gerhard-Mercator (Germany)
- Universitat Politecnica de Valencia
- University de Strasbourg (Germany)
- National Documentation Center (Greece)
- National Library of Portugal (Portugal)
- Sogang University (Korea)
- Virginia Polytechnic Institute and State University (USA)

NDLTD Union Catalog How can you participate?

- Simple No hassles; No fees; Just a desire to participate
- Send us your metadata or tell us where to harvest it from. Be sure that the URL is included.
- Send us periodic updates (or allow us to harvest them) once a quarter or semester is enough.
- There are many benefits to your institution but there are even more benefits to your researchers.

VTLS NDLTD Union Catalog Statistics 5. Number of ETDs in Union Catalog

- As of May 1, 2002 there are **4,362** ETD's in the NDLTD Union catalog Database maintained by VTLS.
- Data received from the British Library has not been loaded yet as the records are being converted to the format for loading.
- This load will add approximately 100,00 records to the database but not all records are for ETDs. Should these be included?

VTLS NDLTD Union Catalog Statistics 5. Number of Accesses per month

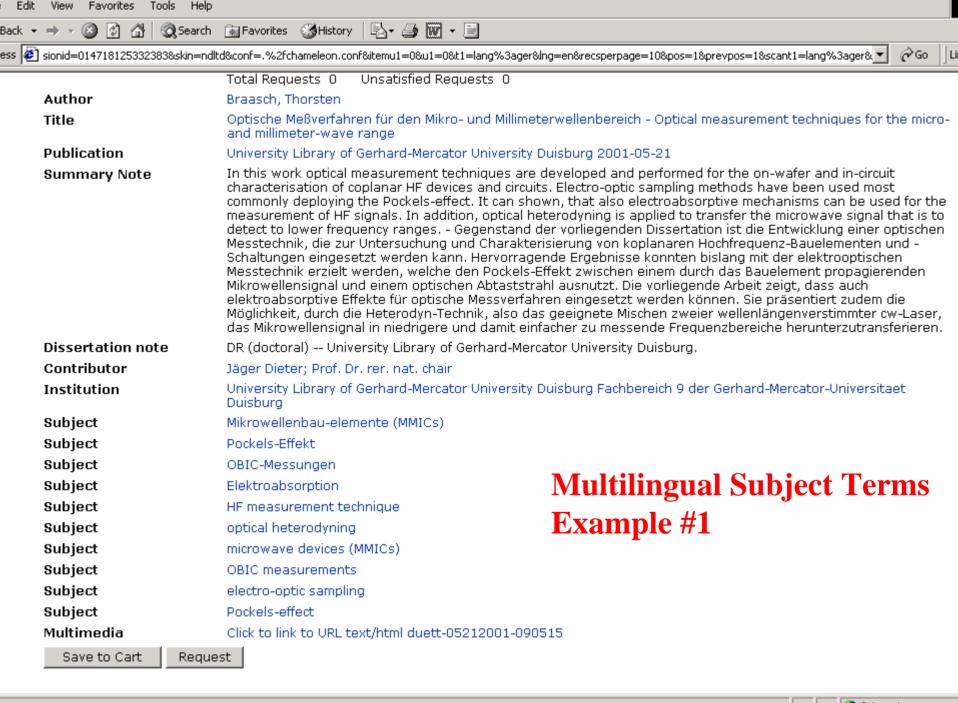
- April 2002 27,760 requests.
- May 2002 so far 28,516 requests.

NDLTD Union Catalog Additional Changes needed

- Changes to searches
 - Committee Member Searches **done**
 - Name browses on any word of the name **in process**
- Changes to data mapping –in process
- Some changes to user interface
- Some challenges Today's topic
 - Multilingual subject terms and issues around it.
 - please see examples that follow.

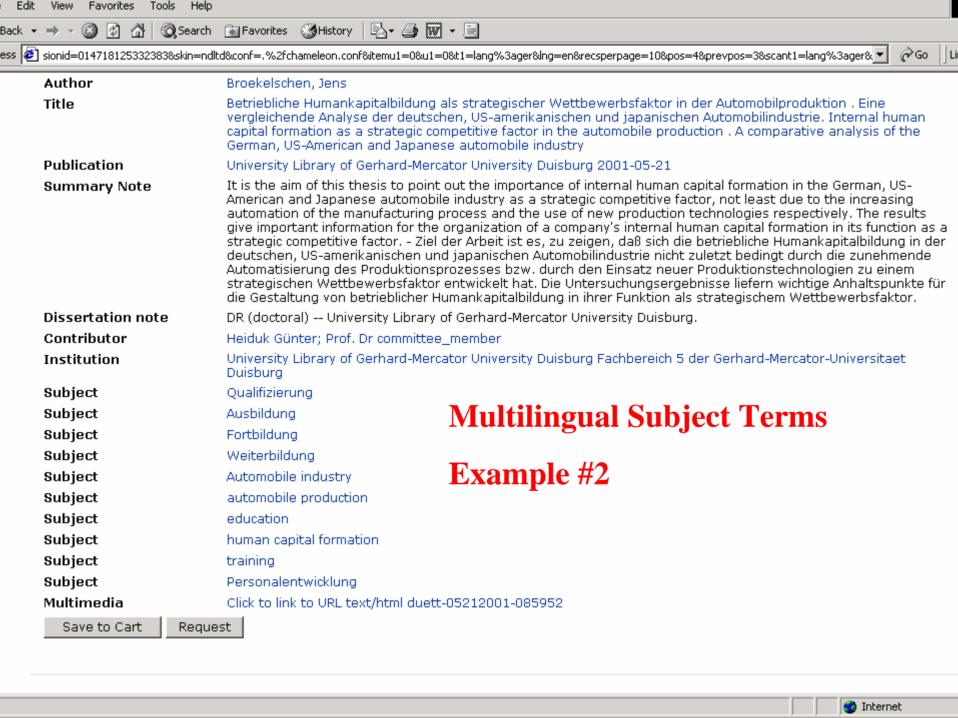
NDLTD Union Catalog Importance of Subject Terms

- Subject terms are essential to find ETDs from different sources
- No standard thesaurus or controlled vocabulary is in use at this time
- Other questions:
 - Use classification system?
 - Use vernacular or English terms or both?
 - See examples of actual data



Challenges: Multilingual Subject Terms #1: No apparent correspondence

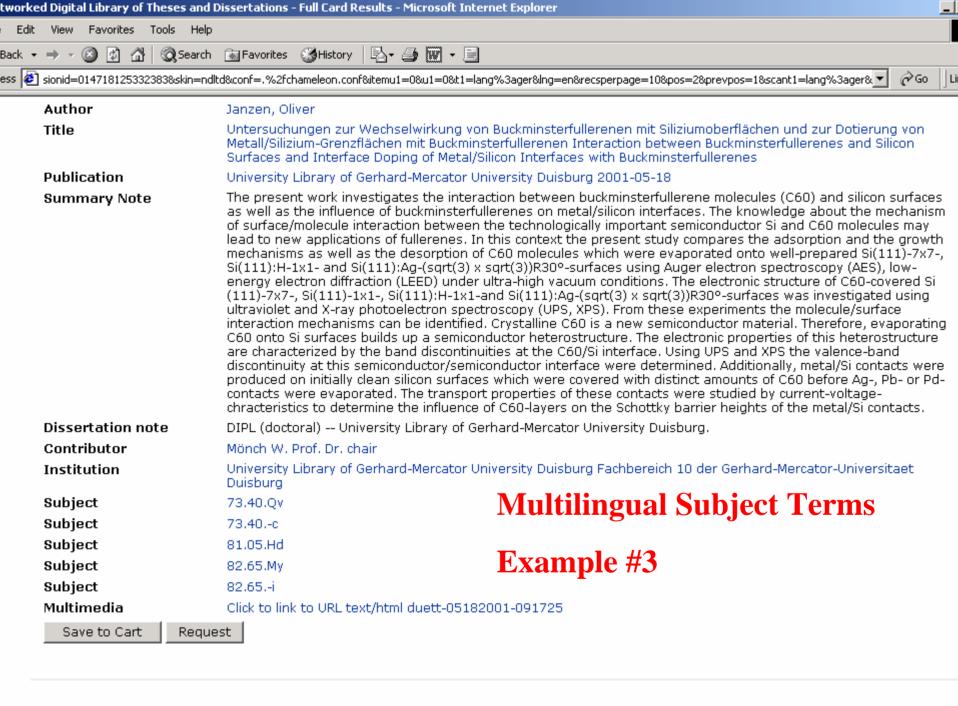
- Mikrowellenbau-elemente (MMICs)
- Pockels-Effekt
- OBIC-Messungen
- Elektroabsorption
- HF measurement technique
- microwave devices (MMICs)
- Pockels-effect
- OBIC measurements
- optical heterodyning
- electro-optic sampling



Challenges: Multilingual Subject Terms #2 No order or language designation.

- Qualifizierung
- Ausbildung
- Fortbildung
- Weiterbildung
- Automobile industry
- automobile production
- education
- human capital formation
- training
- Personalentwicklung

Appears that words beginning with capital letters are German words and the others are English words.



/amara

Challenges: Multilingual Subject Terms #3: No subject terms – classification system instead?

- **73.40.Qv**
- **■** 73.40.-c
- 81.05.Hd
- **82.65.My**
- 82.65.-i



a current on the electrical transmission line. This work describes several tools, which are developed for the simulation of travelling-wave photodetectors. The simulation tools allow the calculation of the local optical intensity inside the optical wavequide with BPM and analytical methods. The optical intensity is used to calculate the distributed photo current, which is generated in the distributed photo current source due to carrier generation. The current of this distributed current source is finally used to calculate the currents and voltages of the distributed equivalent circuit of the coplanar electrical wavequide. The realised simulation tools allow a complete description of the optoelectronic conversion of the travelling-wave photodetector including optical input, electrical output, and optoelectronic conversion including wave propagation effects. The simulation tools are used to optimise the travelling -wave photodetector. The simulations are validated using results from different characterisation methods. Two optoelectronic measurement setups for generation of optical heterodyne signals with beating frequencies of up to 60 GHz are realized and used for this work. Several new material systems are developed for the fabrication of travelling-wave photodetectors. The realised devices are the first InP travellingwave photodetectors with an absorption length of approx, 900 µm for operation at 60 GHz with 1.3 µm to 1.55 µm optical wavelength. Saturation effects are not visible at 60 GHz for optical input powers of up to 12.5 dBm due to the distributed absorbing layer. The realised travelling-wave photodetectors have a efficiency of 0.23 A/W at 1.55 um optical wavelength and operation at 60 GHz. A comparison with other high-speed photodetectors shows, that the travelling-wave photodetector belongs to the most powerful optoelectronic converters in the millimeterwave regime.

Dissertation note

DR (doctoral) -- University Library of Gerhard-Mercator University Duisburg.

Contributor

Prof. Dr. Dieter Jäger chair

Institution

University Library of Gerhard-Mercator University Duisburg Fachbereich 9 der Gerhard-Mercator-Universitaet

Duisburg

Subject Subject Hochfrequenz Wanderwellen

Subject

Photodetektor

Subject highfrequency

Subject

travelling-wave

InGaAlAs:

Subject

Subject photodetector

Subject radiofrequency

Subject InP

Subject Hochfrequenztechnik

Multimedia Click to link to URL text/html duett-05312001-122913

Save to Cart

Request

Multilingual Subject Terms

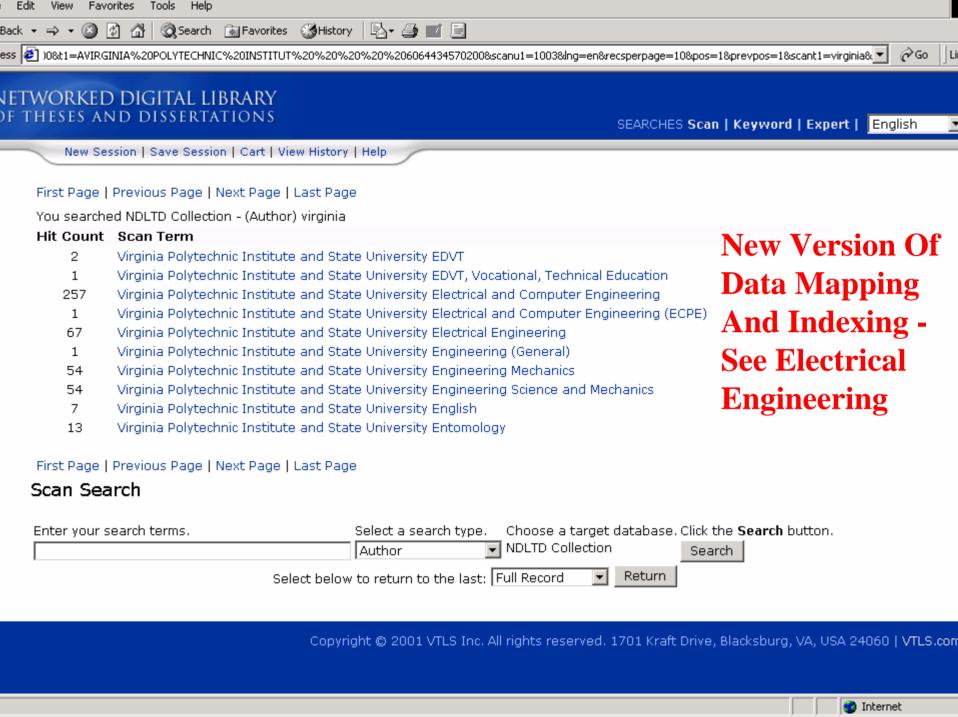
Example #4

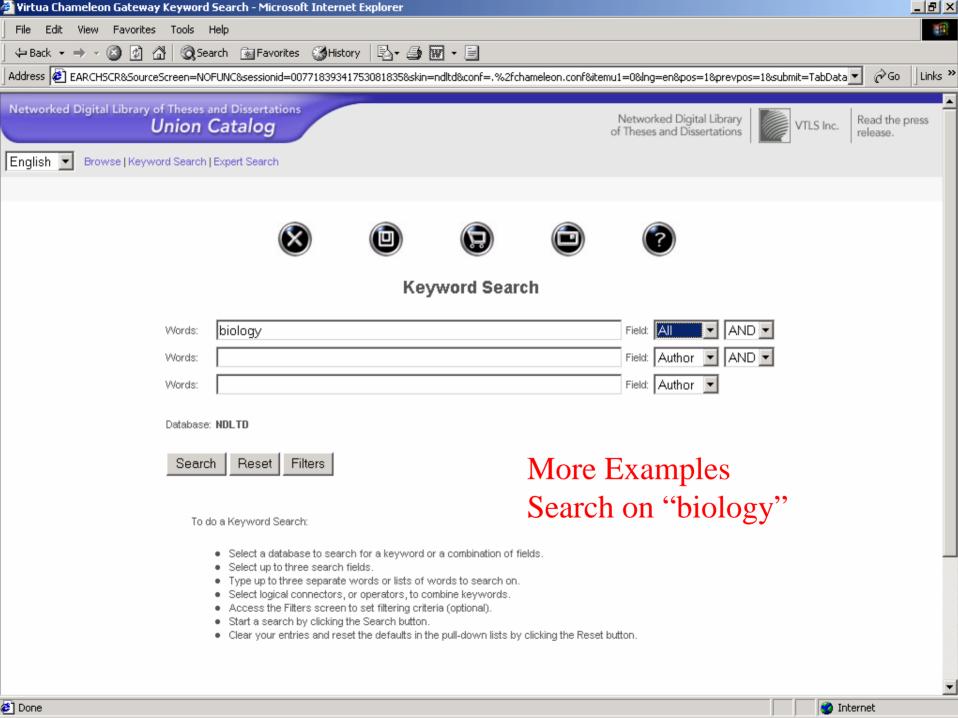
Challenges: Multilingual Subject Terms #4: No word spacing in English terms

- Hochfrequenz
- Wanderwellen
- Photodetektor
- highfrequency
- travelling-wave
- InGaAlAs
- photodetector
- radiofrequency
- InP
- Hochfrequenztechnik







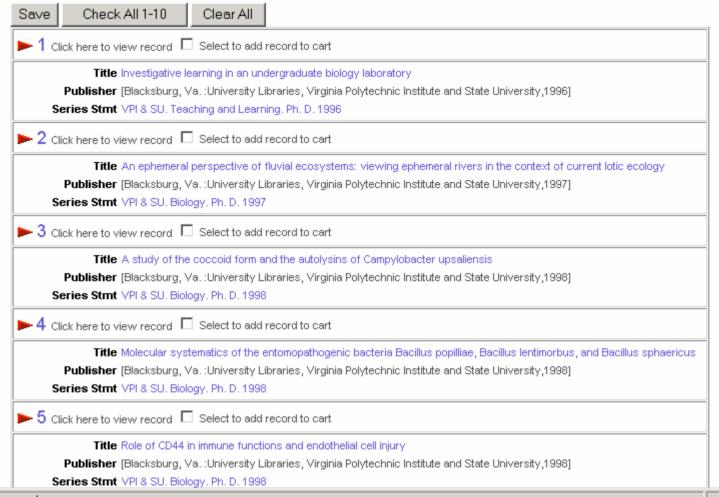




Intermediate Results

First 10 Prev 10 Next 10 Last 10

Records 1 through 10 of 15















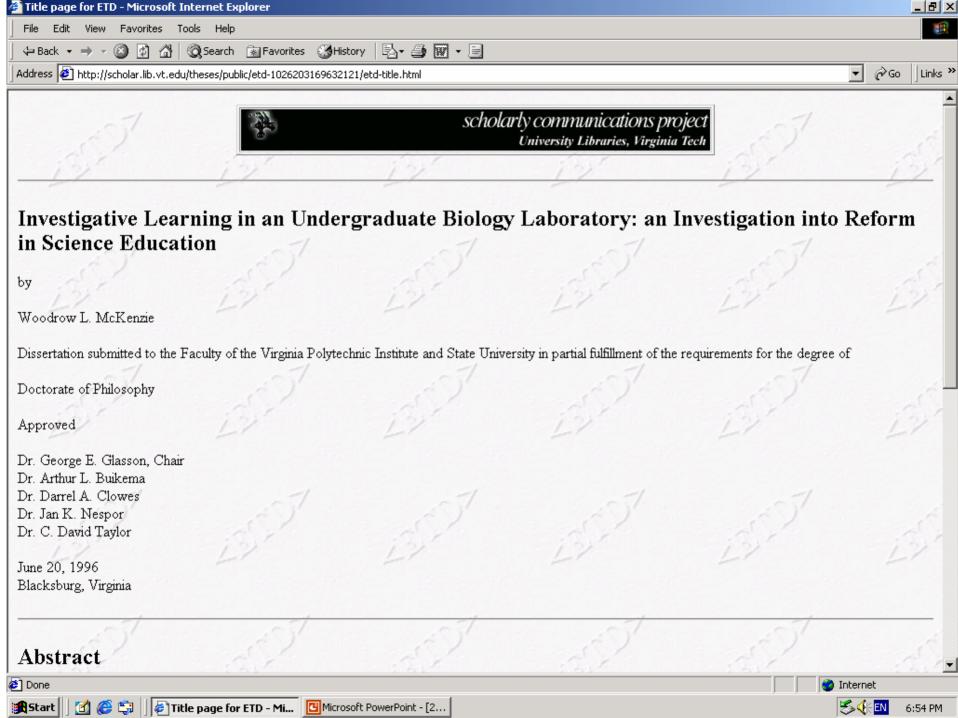


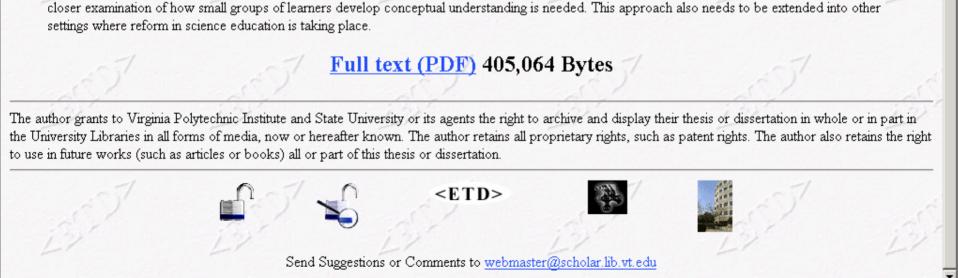
Full Card Results

First 10 Prev 10 Next 10 Last 10

full| marc

learning to conceptual change theory. Qualitative research methods were employed to collect a variety of data. Documentation of this innovative curriculum is provided. This investigative curriculum incorporated the research practices that scientists use. A wide range of dynamic interactions with students actively investigating problems and thoughts during this time occurred. This essentially modeled the authentic practices of scientists. A direct comparison was made with this learning environment and the model for learning. Peer tutoring, cooperative learning, and most importantly, peer collaboration were observed when students grappled with difficult problems for which there was no single right answer. Teachers served as guides in learning, shifting responsibility to students. Analysis of student writing revealed richer, more complex definitions of species after the experience of the laboratory. Several of the students used knowledge gained directly from their experiences during the laboratory project to help elaborate their definitions. (continued) The electronic discussions showed a range of social interactions and interactivity. High quality discussions were found to be rich in scientific thought, engaging discussants by offering information, questioning, and actively hypothesizing. Mediating and facilitating discussions by the participants was found to be an important factor in their success. Groups exhibiting high quality discussions also had a slower repsonse time than other groups, indicating that more substantive dialogues which are rich in thought proceed.	Author	McKenzie, Woodrow L.
Series VPI & SU. Teaching and Learning. Ph. D. 1996 Multimedia Click to link to URLhttp://scholar.lib.vt.edu/theses/public/etd-1026203169632121/etd-title.html Summary Note This study examined an innovative, project-based curriculum in a freshman biology laboratory by focusing on how students developed their conceptual understanding of a biological species. A model for learning was posed based on learners working in small groups. This model linked a socio-cultural approach to teaching and learning to conceptual change theory. Qualitative research methods were employed to collect a variety of data. Documentation of this innovative curriculum is provided. This investigative curriculum incorporated the research practices that scientists use. A wide range of dynamic interactions with students actively investigating problems and thoughts during this time occurred. This essentially modeled the authentic practices of scientists. A direct comparison was made with this learning environment and the model for learning. Peer tutoring, cooperative learning, and most importantly, peer collaboration were observed when students grappled with difficult problems for which there was no single right answer. Teachers served as guides in learning, shifting responsibility to students. Analysis of student writing revealed richer, more complex definitions of species after the experience of the laboratory. Several of the students used knowledge gained directly from their experiences during the laboratory project to help elaborate their definitions. (continued) The electronic discussions showed a range of social interactions and interactivity. High quality discussions were found to be rich in scientific thought, engaging discussants by offering information, questioning, and actively hypothesizing. Mediating and facilitating discussions by the participants was found to be an important factor in their success. Groups exhibiting high quality discussions also had a slower repsonse time than other groups, indicating that more substantive di	II II	
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Summary Note This study examined an innovative, project-based curriculum in a freshman biology laboratory by focusing on how students developed their conceptual understanding of a biological species. A model for learning was posed based on learners working in small groups. This model linked a socio-cultural approach to teaching and learning to conceptual change theory. Qualitative research methods were employed to collect a variety of data. Documentation of this innovative curriculum is provided. This investigative curriculum incorporated the research practices that scientists use. A wide range of dynamic interactions with students actively investigating problems and thoughts during this time occurred. This essentially modeled the authentic practices of scientists. A direct comparison was made with this learning environment and the model for learning. Peer tutoring, cooperative learning, and most importantly, peer collaboration were observed when students grappled with difficult problems for which there was no single right answer. Teachers served as guides in learning, shifting responsibility to students. Analysis of student writing revealed richer, more complex definitions of species after the experience of the laboratory. Several of the students used knowledge gained directly from their experiences during the laboratory project to help elaborate their definitions. (continued) The electronic discussions showed a range of social interactions and interactivity. High quality discussions were found to be rich in scientific thought, engaging discussants by offering information, questioning, and actively hypothesizing. Mediating and facilitating discussions by the participants was found to be an important factor in their success. Groups exhibiting high quality discussions also had a slower repsonse time than other groups, indicating that more substantive dialogues which are rich in thought proceed at a slower pace. Significantly, an important connection has been made between the socio-cultural approach to learning	Series	VPI & SU. Teaching and Learning. Ph. D. 1996
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Date Year, Month, Day:20010205		how students developed their conceptual understanding of a biological species. A model for learning was posed based on learners working in small groups. This model linked a socio-cultural approach to teaching and learning to conceptual change theory. Qualitative research methods were employed to collect a variety of data. Documentation of this innovative curriculum is provided. This investigative curriculum incorporated the research practices that scientists use. A wide range of dynamic interactions with students actively investigating problems and thoughts during this time occurred. This essentially modeled the authentic practices of scientists. A direct comparison was made with this learning environment and the model for learning. Peer tutoring, cooperative learning, and most importantly, peer collaboration were observed when students grappled with difficult problems for which there was no single right answer. Teachers served as guides in learning, shifting responsibility to students. Analysis of student writing revealed richer, more complex definitions of species after the experience of the laboratory. Several of the students used knowledge gained directly from their experiences during the laboratory project to help elaborate their definitions. (continued) The electronic discussions showed a range of social interactions and interactivity. High quality discussions were found to be rich in scientific thought, engaging discussants by offering information, questioning, and actively hypothesizing. Mediating and facilitating discussions by the participants was found to be an important factor in their success. Groups exhibiting high quality discussions also had a slower repsonse time than other groups, indicating that more substantive dialogues which are rich in thought proceed at a slower pace. Significantly, an important connection has been made between the socio-cultural approach to learning and conceptual change theory. A closer examination of how small groups of learners develop conceptual understanding is ne
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Documentation of this innovative curriculum is provided. This investigative curriculum incorporated the research practices that scientists use. A wide range of dynamic interactions with students actively investigating problems and sharing both their findings and thoughts during this time occurred. This essentially modeled the authentic practices of scientists. A direct comparison was made with this learning environment and the model for learning. Peer tutoring, cooperative learning, and most importantly, peer collaboration were observed when students grappled with difficult problems for which there was no single right answer. Teachers served as guides in learning, shifting responsibility to the students. Analysis of student writing revealed richer, more complex definitions of species after the experience of the laboratory project. Several of the students used knowledge gained directly from their experiences during the laboratory project to help elaborate their definitions. The electronic discussions showed a range of social interactions and interactivity. High quality discussions were found to be rich in scientific thought, engaging discussants by offering information, questioning, and actively hypothesizing. Mediating and facilitating discussions by the participants was found to be an important factor in their success. Groups exhibiting high quality discussions also had a lower response time than other groups, indicating that more substantive dialogues which are rich in thought proceed at a slower pace. Significantly, an important connection has been made between the socio-cultural approach to learning and conceptual change theory. A

approach to teaching and learning to conceptual change theory. Qualitative research methods were employed to collect a variety of data.

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Abstract

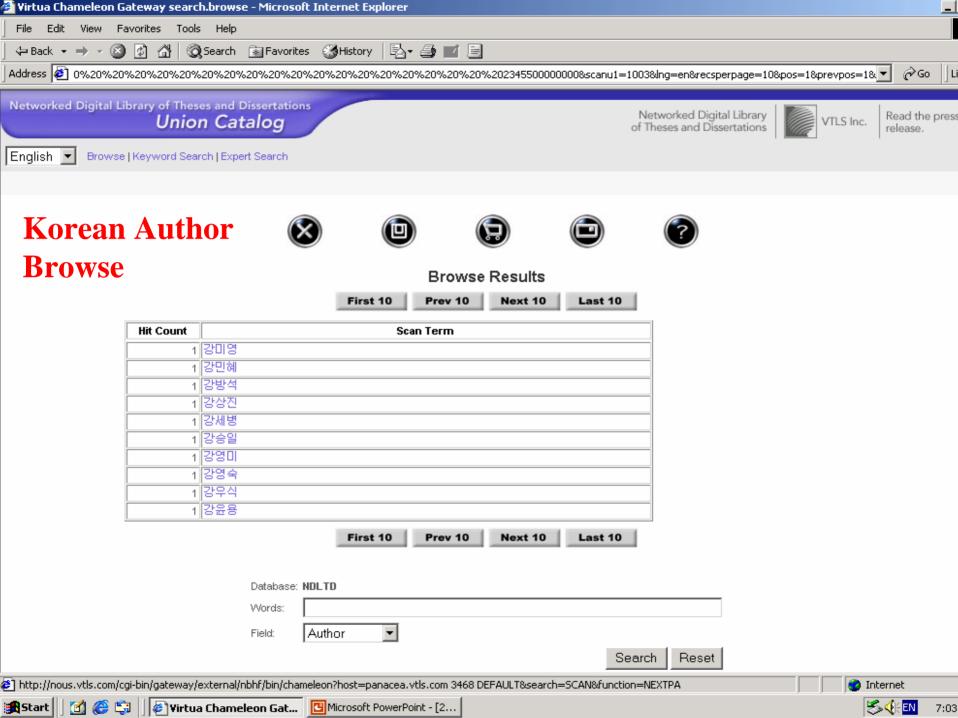
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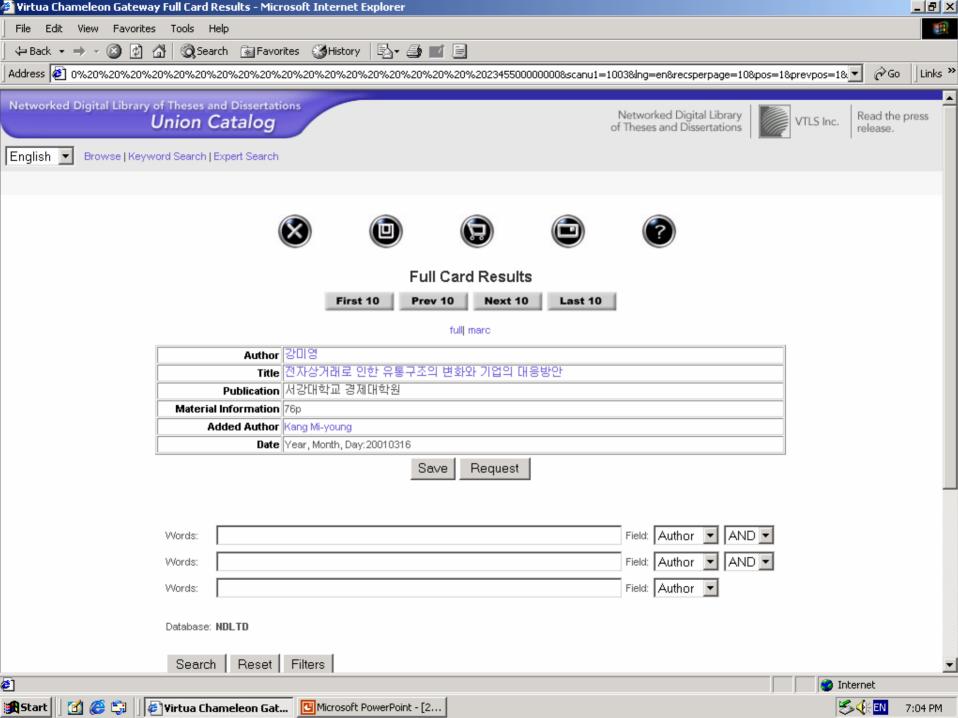
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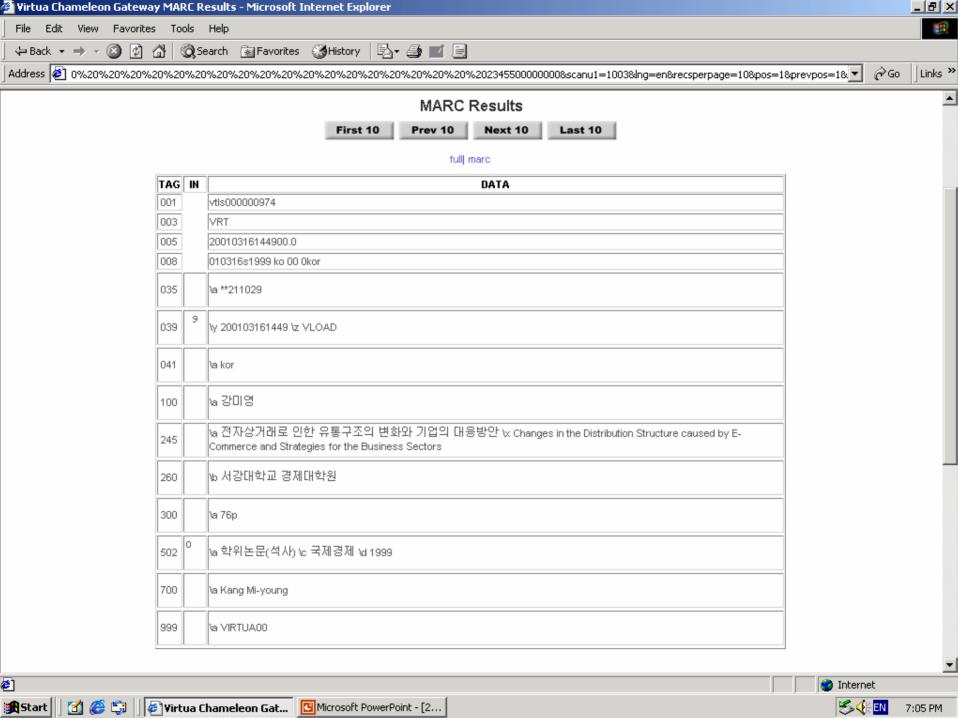
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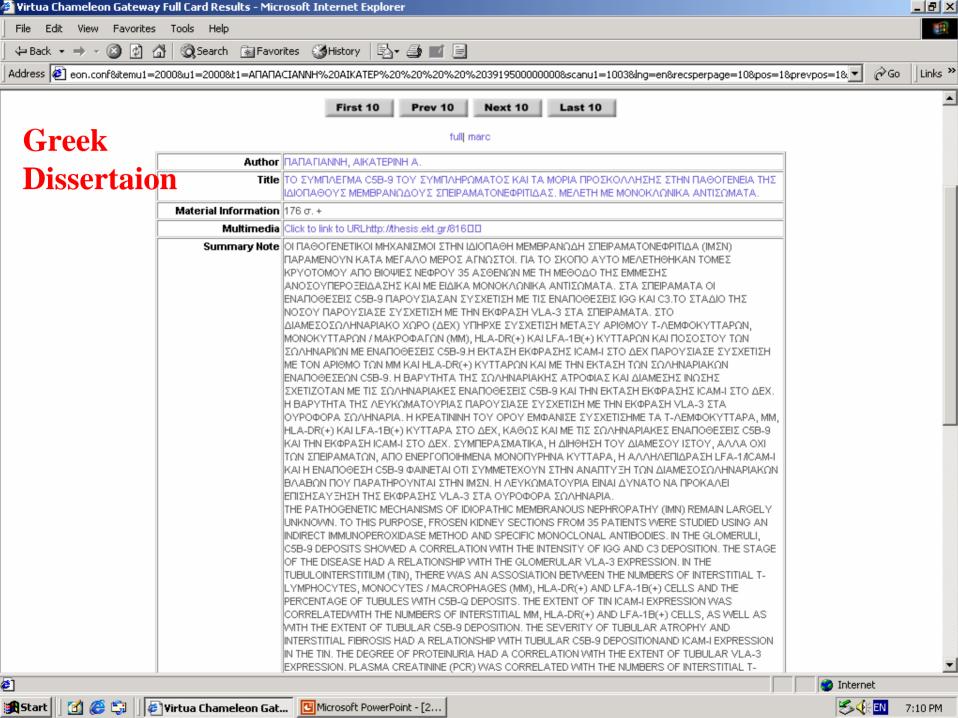
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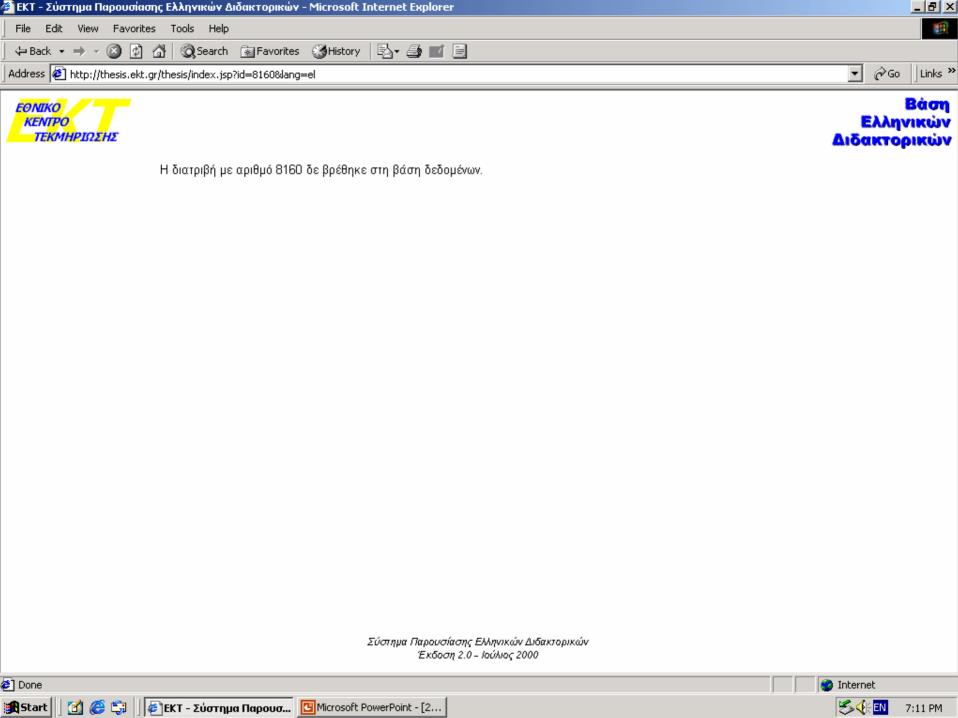


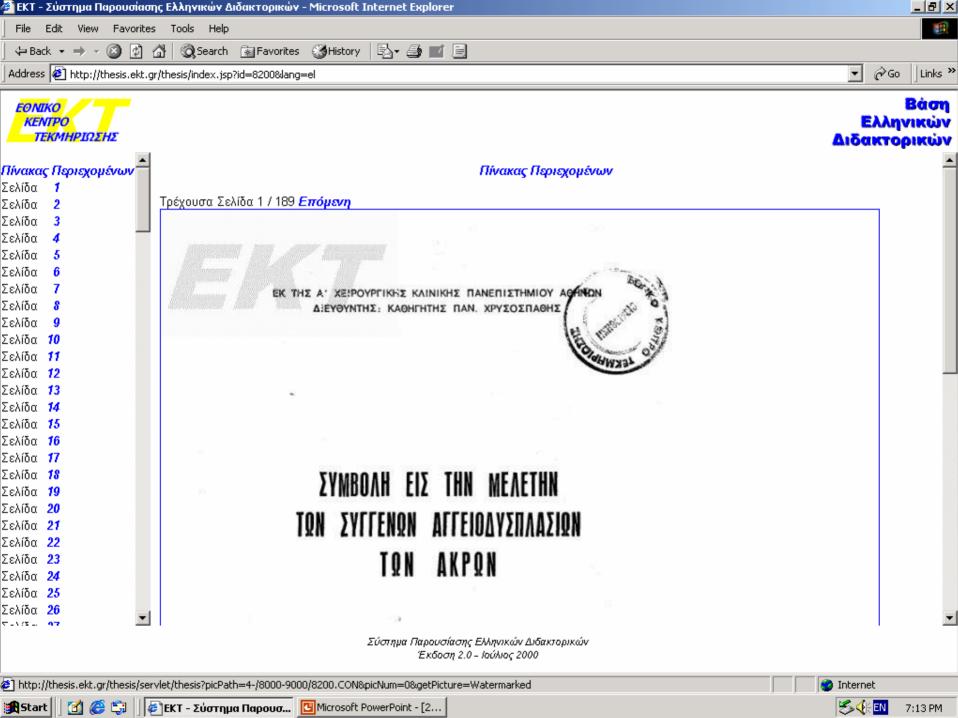


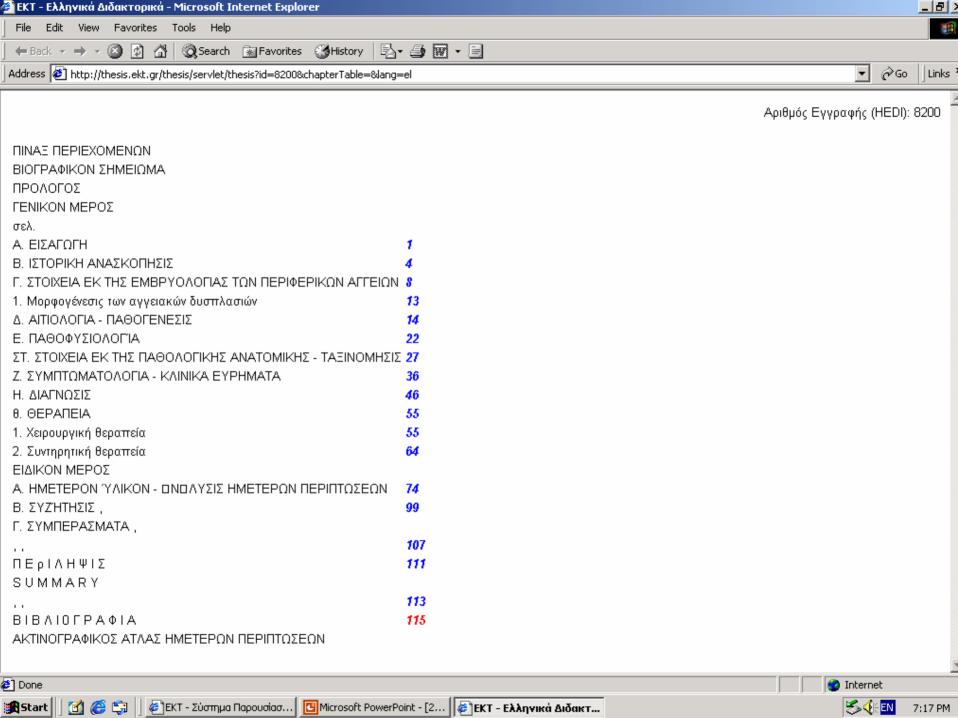


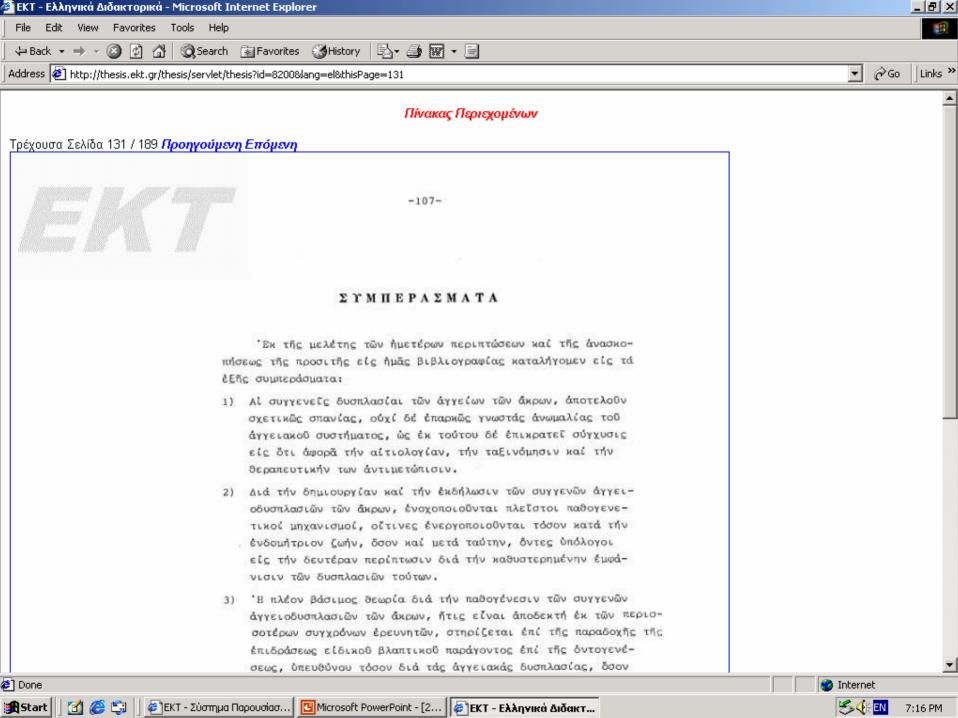












Do and Don't List for Content of Data

- Do Use a subject classification system
 - Standards committee discussed this topic
 - Discussion of Dewey and UDC
 - Discussion of multilingual subject headings
 - Discussion of multilingual subject terms
 - Language issue here vernacular, Englsh, or both
- Do- Include Institution Name, Department name, Degree, and Year

Do and Don't List for Content of Data

- Don't add descriptor information on numerical data. Example: 340 pages
 - Let the tagging show that the field is number of pages
 - What to do with units like inches and cms? Lbs and kg?
- Do add descriptor information on local control number or use DOI or some other standard object identifier
 - Oclc1232345, vtls 9345267, rero156789
 - Numbers are not unique when merged in union database
- Don't add titles in vernacular and in English in the same tag. But if you do at least add a language code

Do and Don't List for Content of Data

- Don't put URLs in locally defined fields
 - Like MARC 901
 - Like <userdefined> URLdata </userdefined>
- Don't have locally defined fields in exported data
- This is not an exhaustive list yet as we have just started working with external data.

NDLTD Union Catalog Future

- Greater participation
 - We plan to contact all institutions that have ETDs to see if they wish to submit their metadata.
- Better usage statistics
 - At present there are about 20,000 accesses per month
- Enhanced records?
 - About Committee Members
 - About Institutions
 - TOC
 - About authors

Without downloading the whole document.

A Union Catalog for NDLTD Your Opinion?

- Should the NDLTD union catalog be limited to records of ETDs or should be it accept records of all Theses and Dissertations from an NDLTD member institution?
 - One is tempted to say yes BUT...
 - Some institutions have committed to digitizing theses and dissertations IF and WHEN they are requested.
 - Would the union catalog aid in this discovery process?
 - Is this a role better served by others?



Questions and Answers



Free access to NDLTD union catalog at

WWW.VTLS.COM/NDLTD