

NLM의 DCMS와 MTI 도입을 통한 KoreaMed MeSH 입력 혁신 방안

정 소 나

KoreaMed 1996년 이후 ~



- 9층내 사물함 미충당성 안내
- 2009년 3-4월 도서관 이용교과
- 특별연락처/스탠딩 전보

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UpToDate	JCR	KIS
Cochrane Library	Anatomy TV	RIS
CINAHL	MEDLIS	KO



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주요정보검색 SEARCH

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키워드 전방일치 완전일치

전체 [v] [검색]

울산대학교 아산의학도서관

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[공지]4월 PubMed / EndNote 정기강좌 안내 NEW	[조회수 : 68]
[책읽는 즐거움]커피, 그 달콤 쌉싸래한 매력 속으로..	[조회수 : 76]
[공지]Protein Lounge 이용방법 변경 (ID -> IP 방식)	[조회수 : 73]
[공지]일본의학저널 검색 Medical Online 영문판 안내	[조회수 : 213]
[공지]Henry Stewart Talks 온라인 세미나 시범서비스	[조회수 : 217]

ID PW **Log-In**

회원가입 | 아이디저장

SEARCH

e - Resources

- WebDB 국외
 - PubMed with Fulltext
 - Web of Science (SCI)
 - EMBASE
 - MDConsult
 - Current Protocols
 - Cochrane Library
 - CINAHL with Fulltext
 - UpToDate/MEDLINE(OVID)
- eJournals - eBooks
- 일본의학회지 원문 DB Tr

MY LIBRARY

- 대출/경신/예약
- One-stop 서비스
- SDI 서비스
- 주제검색서비스
- 희망도서신청/도서구매대행
- My Links

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자주찾는 정보원 **다 찾아보기!(Frequently Used Electronic Resources)**

Cochrane Library	Endnote NEW	Harrison's online
Images.MD	KoreaMed	Kmbase
저널약어검색	Ovid Medline	Web of Science

8에 최적화 되어 있으며, XML 코드를 사용하므로 Netscape나 Explorer 5.0 이하에서는 이용에 제약이 있을 수 있습니다.
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KoreaMed MeSH 구축 현황

유형	구축방법
PubMed 등재학술지(14종)	PubMed MeSH -> Copy
김호배(한의도협)	Data Conversion
MeSH 색인연구팀 (2004)	Data 입력
계	79 종 22,062 record

MeSH 구성요소

1) 표목 Headings (Descriptor)



2) 부표목 MeSH Subheadings (Qualifiers)

3) 보조개념레코드 Supplementary Concept Records : SCRs



TI - 10
 IP - 6 Suppl 1
 DP - 2001 Dec
 TI - Brief Introduction of Panax ginseng C
 PG - S3-S5
 AB - For many many thousand years, mankind plants as nutrient, beverage, cosmeti maintain health and to improve qualit particularly, Panax ginseng C.A. Meye the most precious plant among herbs, the spotlight worldwide. Even in the there are greatly advanced research f qualified man-power available, and ar capable of conquering any hard-to-cur peoples has recently been reported to particularly ginseng. In the present many scientists contributed papers pe "Chemopreventive effects of ginseng". the readers understand easier and bet collection as follows: The spiritual the Far East, the history of ginseng, geographical distribution of ginseng, products.
 AU - Yun TK
 FAU - Yun, Taik Koo
 LA - EN
 PT - Journal Article
 MH - Far East
 MH - Human
 MH - *Panax/classification
 MH - Terminology
 KW - Ginseng
 KW - Chemoprevention
 KW - Panax ginseng C.A. Meyer
 TA - J Korean Med Sci
 SO - J Korean Med Sci 2001 Dec;16(6) Suppl

TI - Brief introduction of Panax ginseng C.A. Meyer.
 PG - S3-5
 AB - For many many thousand years, mankind has been using various plants as nutrient, beverage, cosmetics, dye and medicine to maintain health and to improve quality of life. In Aisa, particularly, Panax ginseng C.A. Meyer is considered to be the most precious plant among herbs, and ginseng has been in the spotlight worldwide. Even in the Western world, where there are greatly advanced research facilities and highly qualified man-power available, and are regarded to be capable of conquering any hard-to-cure ailments, many peoples has recently been reported to use herbal medicine, particularly ginseng. In the present compilation of papers, many scientists contributed papers pertaining to "Chemopreventive effects of ginseng". In order to facilitate the readers understand easier and better, I catalogued this collection as follows: The spiritual nature of ginseng in the Far East, the history of ginseng, nomenclature and geographical distribution of ginseng, and type of ginseng products.
 AD - Laboratory of Experimental Pathology, Korea Cancer Center Hospital, Seoul, Korea. tkyun@nuri.net
 FAU - Yun, T K
 AU - Yun TK
 LA - eng
 PT - Journal Article
 PL - Korea (South)
 TA - J Korean Med Sci
 JT - Journal of Korean medical science
 JID - 8703518
 SB - IM
 MH - Far East
 MH - Humans
 MH - *Panax/classification
 MH - Terminology as Topic
 EDAT- 2001/12/19 10:00
 MHDA- 2002/03/07 10:01
 CRDT- 2001/12/19 10:00
 AID - 200112s003 [pii]
 PST - ppublish
 SO - J Korean Med Sci. 2001 Dec;16 Suppl:S3-5.

Examples are:

```
<MeshHeadingList>
<MeshHeading>
<DescriptorName MajorTopicYN="N">Adult</Des
</MeshHeading>
<MeshHeading>
<DescriptorName MajorTopicYN="N">Cardiovascu
<QualifierName MajorTopicYN="N">etiology</Qu
<QualifierName MajorTopicYN="Y">mortality</Q
</MeshHeading>
<MeshHeading>
<DescriptorName MajorTopicYN="N">English Abs
</MeshHeading>
<MeshHeading>
<DescriptorName MajorTopicYN="N">Fetal Growt
<QualifierName MajorTopicYN="N">complications
<QualifierName MajorTopicYN="Y">physiopatholo
</MeshHeading>
<MeshHeading>
<DescriptorName MajorTopicYN="N">Human</D
</MeshHeading>
</MeshHeadingList>
```

An example of a chemical list is:

```
<Chemical List>
<Chemical>
<RegistryNumber>69-93-2</RegistryNumber>
<NameOfSubstance>Uric Acid</NameOfSubstance>
</Chemical>
<Chemical>
<RegistryNumber>6964-20-1</RegistryNumber>
<NameOfSubstance>tiamenol</NameOfSubstance>
</Chemical>
<Chemical>
<RegistryNumber>EC 3.1.1.34</RegistryNumber>
<NameOfSubstance>Lipoprotein Lipase</NameOfSubstance>
</Chemical>
<Chemical>
<RegistryNumber>EC 3.5.2.6</RegistryNumber>
<NameOfSubstance>beta-Lactamases</NameOfSubstance>
</Chemical>
</ChemicalList>
```


KoreaMed MeSH 개선

- ▶ MeSH Authority File 을 KoreaMed에서 활용하지 않음

가. PubMed 등재 KoreaMed 학술지의 경우 :매년 갱신(진화함) / KoreaMed의 MeSH에는 반영되지 않음

나. PubMed 등재되지 않은 KoreaMed 학술지에 대한 MeSH 작업 필요

- ▶ 궁극적으로 KoreaMed 질적 개선이 필요함

- ▶ 해결책 : PubMed에서의 색인절차와 동일한 방법으로 KoreaMed에 구현

가. MeSH Authority File 활용

나. Citation Maintenance 구현 -> 매년 System update

다. DCMS(Data Creation and Maintenance System) 의 MTI system을 사용할 수 있는지 확인하여 Semi-Automatic Indexing 수행

가. MeSH Authority File 활용과 갱신



MeSH Browser

- [Online searching](#) of MeSH vocabulary
- [About](#) the MeSH Browser
- [Suggestions](#) for authors' keywords



All About MeSH

- [MeSH Fact Sheet](#)
- [Publications and presentations](#) by MeSH staff
- [Introduction](#) to MeSH
- [Information from Previous Years](#)



Obtaining MeSH

- [Download](#) electronic copies.
- Lists of [Annual Changes to MeSH](#)



Citation Maintenance

- [About Updates](#).
- [Download XML Files](#).



MeSH vocabulary suggestions.

- [MeSH vocabulary suggestions](#).



What's New

- [Printed MeSH Discontinued](#)
- [2009 MeSH Files Available](#)

Related Efforts

- [Unified Medical Language System \(UMLS®\)](#)
- [NLM Classification](#)
- [RxNorm](#)
- [DailyMed](#)

MeSH Staff



- [Biographies and email](#)
- [Publications and presentations](#)

▶ <http://www.nlm.nih.gov/mesh/meshhome.html>

Medical Subject Headings - Files Available to Download

Download of any of the full data files requires the completion of an online [Memorandum of Understanding](#).

- 2009 MeSH
 - **These formatted versions of the entire MeSH vocabulary are available to download.** For best results in downloading, use of a graphical interface is recommended.
 - [2009 MeSH in XML format](#). MeSH descriptors and qualifiers, and Supplementary Concept Records (formerly Supplementary Chemical Records) in XML format. Files are updated weekly. Supplementary records are compatible with 2009 MeSH descriptors. Descriptor file is 260MB in size, uncompressed. Compressed file is 14MB.
 - [Sample XML](#)
 - [XML Data Elements](#)
 - DTD files
 - [Descriptor DTD](#)
 - [Qualifier DTD](#)
 - [SCR DTD](#)
 - [About XML MeSH](#)
 - [Conversion Table](#)
 - [Conversion from ASCII MeSH format to XML](#)
 - [Introduction to XML MeSH](#)
 - [2009 MeSH in ASCII format](#). MeSH descriptors and qualifiers, and Supplementary Concept Records (formerly Supplementary Chemical Records), in ASCII format. Files are updated weekly. The descriptor file is 25MB in size and may take more than 30 minutes to download using a connection 2400 bps or slower. Postings data in descriptor and qualifier records reflect updates in citation files through the October, 2000 entry month. Note that subfield separator for descriptor entry terms has been changed from a colon to a bar (|) in order to make it easier to parse terms containing colons.
 - [Sample Text](#)
 - [About ASCII MeSH](#)
 - [2009 MeSH Trees](#). MeSH main headings with the tree numbers that place the heading in a hierarchical arrangement. Sorted by tree number. ASCII format. [1.8MB]
 - [Sample Text](#)

나. Citation Maintenance 구현



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Citation Maintenance

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MeSH vocabulary suggestions.

- [MeSH vocabulary suggestions](#).



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Related Efforts

- [Unified Medical Language System \(UMLS®\)](#)
- [NLM Classification](#)
- [RxNorm](#)
- [DailyMed](#)

MeSH Staff



- [Biographies and email](#)
- [Publications and presentations](#)

1) Citation Maintenance process

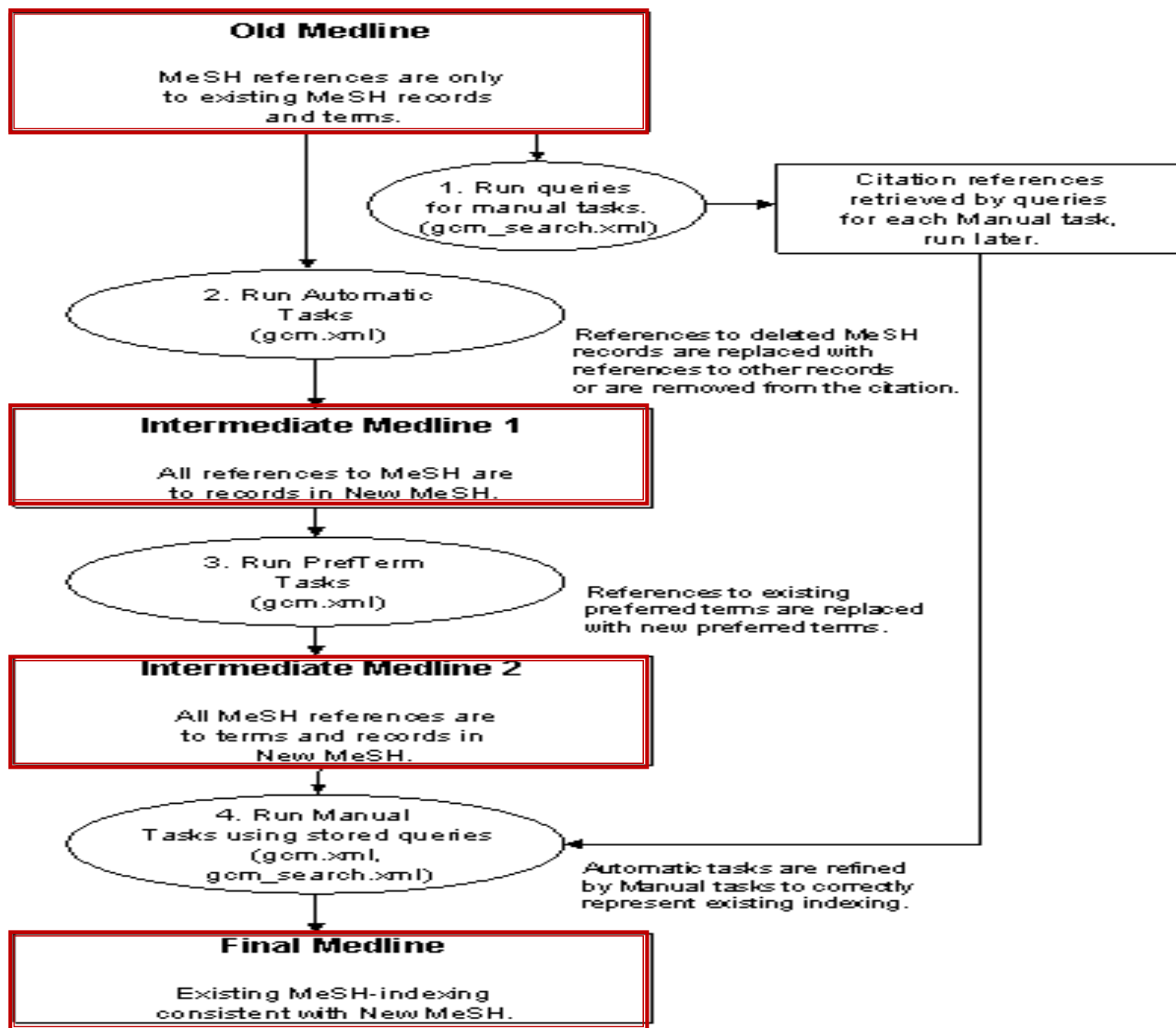
- ▶ Preferred Term changes (우선어 변경시 일괄대체)
 - 예) Interferon Type II -> Interferon-gamma. (in 2009 MeSH the preferred term for the heading)
- ▶ "Automatic" tasks – algorithmic replacements – (MeSH 레코드 삭제시 -> PubMed 데이터를 다른 MeSH 용어로 대체)
 - Automatic algorithmic replacements에 의한 작업
 - PubMed 데이터들이 당해연도의 MeSH로 모두 변환
 - 예) Electrostatics (UI = D019312) was deleted. -> Static Electricity (UI = D055672)
- ▶ "Manual" tasks – case by case changes, requiring a search

PubMed의 MeSH “Citation Maintenance” process

▶ 참고

<http://www.nlm.nih.gov/mesh/gcmdoc.html>

Process	Description	Sequence
1. Queries for Manual tasks	Retrieve sets of citations to be used to specify the range of Manual tasks to be run later.	Query results must be obtained first since later maintenance could impact the queries, written for the previous year's MeSH.
2. Automatic tasks	Replace all references to deleted MeSH records with references to other MeSH records.	Must be run before Manual tasks since Manual tasks are written to supplement Automatic tasks.
3. PrefTerm tasks	Replace MeSH preferred term with a different preferred term.	Must be run after Automatic tasks to avoid impacting these tasks.
4. Manual tasks	Supplement Automatic tasks, usually by adding additional references. Applied to citations previously obtained by query.	Must be run after Automatic tasks, applied to citations identified earlier by queries for each Manual task.



2) Citation Maintenance Files

▶ Files

GCM(Global Citation Maintenance) data are distributed in two files.

- ▶ <http://www.nlm.nih.gov/mesh/gcm.html>

ex) 2009 MeSH

- Maintenance tasks – 2009 [193KB, XML format], DTD
- Searches for Manual tasks – 2009 [94KB, XML format], DTD About 2009 Updates.

다. MeSH 입력

▶ 목표

DCMS(Data Creation and Maintenance System) 의
MTI(Medical Text Indexer system)을 사용할 수 있는
지 확인

- ▶ KoreaMed의 title, Abstract/Synapse fulltext를 대상으로
MTI 시스템을 실행한다(자동색인)
- ▶ MTI 시스템 -> DCMS 시스템으로 MeSH가 display 되면
-> 색인전문가가 MeSH를 부여하는 **Semi-Automatic
Indexing** 수행 -> KoreaMed Record 생성

1) DCMS(Data Creation and Maintenance System)

- ▶ PubMed 등 NLM데이터베이스의 색인과 관리를 위한 웹기반 색인 시스템
- ▶ 인터넷이 가능한 곳이면 어디에서든 접근이 가능하다
-> 찾지 못함
- ▶ MeSH와 PubMed를 연동한다.
- ▶ DCMS상에서 색인어 자동추출프로그램인 MTI(Medical Text Indexing)와 Gene Indexing과 같은 모듈과 통합하여 사용

Indexing

5 of 27 in: Acta Crystallogr D Biol Crystallogr. 2000 Jun;56 (Pt 6) Status: Incomplete

Pubmed ID : 10818344

Title: Structure of buffalo lactoferrin at 3.3 A resolution at 277 K.

Vernacular Title:

Authors: (1) Karthikeyan, S (2) Yadav, S (3) Paramasivam, M (4) Srinivasan, A (5) Singh, T P

Primary Author Affiliation: Department of Biophysics, All India Institute of Medical Sciences, New Delhi, India

Personal Name Subjects:

Languages: (1)English

Publication Types: (1)Journal Article

Page(s): 694-9

Support Terms & Grants: MO1HR-02635

PMU-MS Grants:

Databanks

Citation Subsets:

Abstract: The three-dimensional structure of buffalo lactoferrin was determined by molecular replacement using the structure of human lactoferrin as a search model. The final R factor was 21.8% for the whole molecule. The structure of the binding cleft and the interface facilitating the binding of two lobes

Abstract Copyright:

General Note:

Investigators:

Other ID:

Publication Model: Print

Electronic Date:

Messages: Show All Messages

http://dcocast:3991@DRS@DRSView.aspx?LabelName=databank&pubmedID=10811789 - Windows Internet Explorer

PDR Reconcile Subsystem - Databank

1:GENBANK/DQ059548	Add New	Search Data		Add to Label
2:GENBANK/U01673	Define		Search	
	Update			
	Reset			
	DCMS			
GENBANK/U01678	View Label Block			

Clear All Select All

Match Not Found

DQ059548), whilst Dd2 is a type II protein (EMBL accession number U01678). The proteins were expressed as GST fusion proteins using the pGEX-2T vector [22]. The GST protein on its own was also expressed from the pGEX-2T vector as a negative control antigen. IgG antibody reactivity to the two MSP2 proteins and four additional antigens were also studied for a limited number of sera. These additional antigens were: AMA1 P14-0 (a full length crocodeman from the FVO AMA1 allele) [23], MSP1-19 (the C-terminal fragment from MSP1) [24] and MSP1 block 2 Palo Alto and MSP1 block 2 RO33 (two of three polymorphic types from the N terminal block 2 region of MSP1) [25]. These antigens were chosen because antibody reactivities against them have been shown to be highly skewed towards either IgG1 (AMA1 and MSP1-19) or IgG3 (MSP1 block 2).

2.3. Enzyme linked immunosorbent assay

Fifty micromoles of MSP1 (U01678), MSP2 (U01673) and GST were used to coat individual wells of

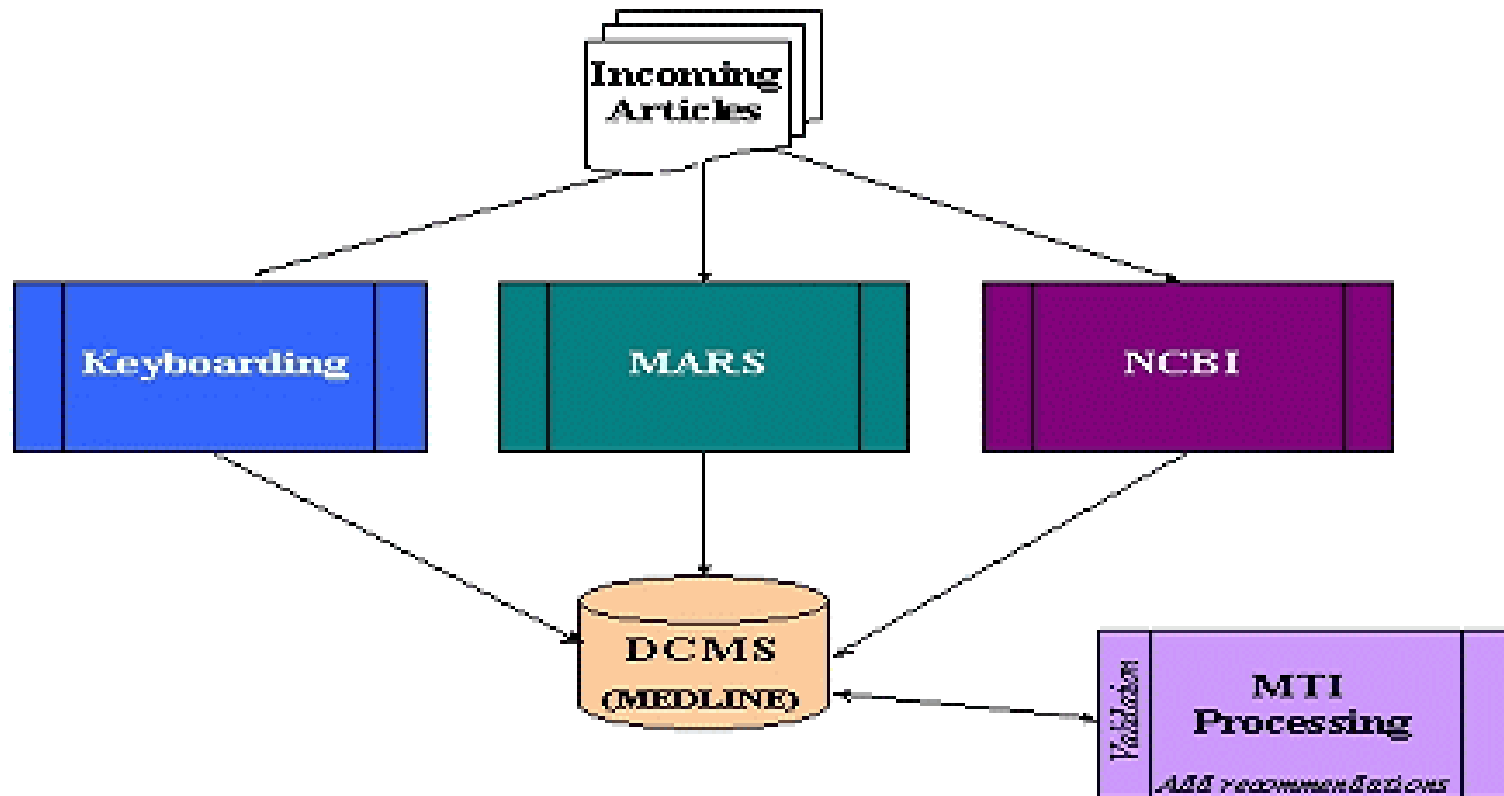
2) MTI(Medical Text Indexing)

- Lister Hill Center에서 논문의 제목과 초록에서 색인어를 추출하기 위하여 개발한 프로그램
- 논문의 제목, 초록, 전문을 처리하여 색인을 추출 MeSH 용어를 DCMS로 보냄
- 색인전문가들은 DCMS 화면상에서 필요한 용어를 선택한다.

색인 방법

1. Automatic Indexing
2. Semi-Automatic Indexing -> MTI Sytem 구동후에 색인전문가가 indexing하는 방법
3. Manual indexing

참고 사이트 : <http://ii.nlm.nih.gov/>

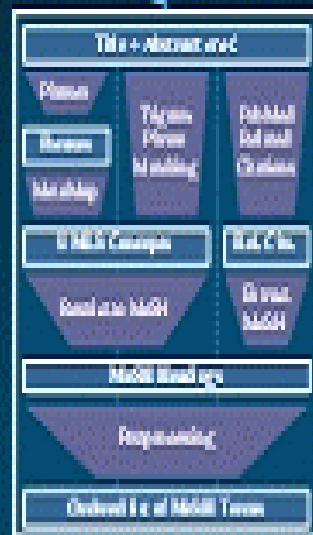


3) PubMed MeSH 입력 프로세스

PubMed Central - Full Text

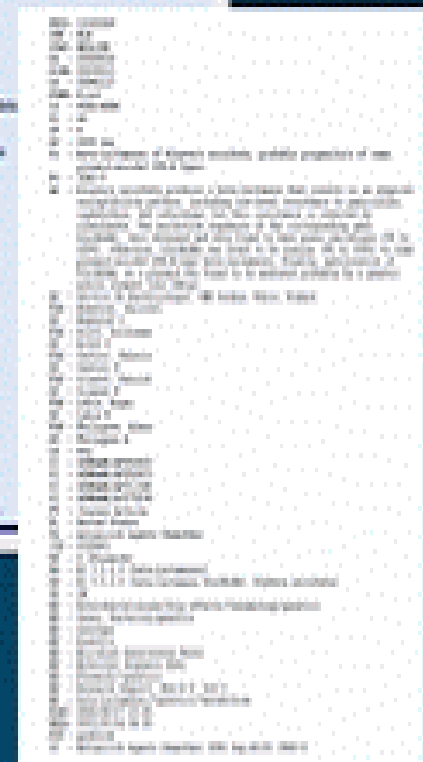
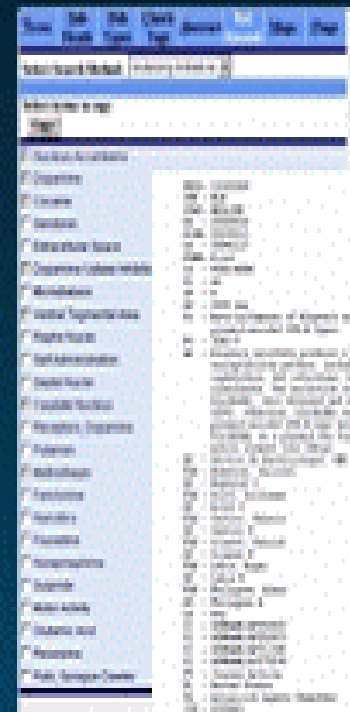


Indexing Task Flow



MTI

DCMS



Medline

