



# Problems for promoting OER/OCW

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# Information Society

- The Society where all information are digitized
  - Bi-directional information flow
  - Almost all information are stored in the WEB
  - Useful information is retrieved by the retrieval engine
- Personal information is shared in the society (Open use)
  - New community is formed by BLOG and Twitter
  - Collective intelligence as a new method



# Information Sharing all over the world

- Information infrastructure is deployed
  - High speed internet access anytime anywhere
  - Digital divide problem arises particularly in developing country
- Knowledge database for commons
  - Many people can publish information
  - Information is shared for all
  - Language barrier exists
- Growing shared multimedia information
  - Image, sound and video data are particularly growing



# Property of Information Society

## ■ Digital information

- is copied very easily

- is opened and shared very easily

## ■ Too many information are available

- Require information easily understood

- Understand only the part understandable

## ■ Access Information

- Scale free network

- Long tail



# Necessary ability for living in a society

## ■ Pre-historical society

- Memorize spoken language

## ■ Mid-Aged society

- Ability to read and write characters

## ■ Industrial society

- Knowledge of science
- Analyze and understand situation
- Make things smartly

## ■ Information Society

- Analyze and understand information
- Information retrieval



# What we teach children in the information Society

- ▣ Education provide to train the ability for the people to live in the society
- ▣ Assume that every child always has a mobile device
  - Language literacy
    - ▶ How to use word processer
    - ▶ Can only read Chinese character or select collect one
  - Calculation
    - ▶ To use calculator
    - ▶ More importance on process of calculation than calculation
- ▣ Knowledge exist in WEB
  - More importance on to use knowledge than to know the knowledge
  - Deeply understanding is necessary



# Education in a classroom

- Classroom appears in MEIJI period
  - Emphasis on the advantage for the students to communicate one another
  - Group education not private education
    - ▶ More efficient?
- Edo period
  - TERAKOYA: private education



# Education in information Society

- Visualize the learning process
  - Change the education method with ICT
  - Many practices in universities are necessary
- Open and Share teaching materials
  - Digitize teaching materials
  - Open and share teaching materials
  - Individuals can open teaching materials to public
  - This is not education in strict sense





# Digitize learning process

## ■ Supporting education with ICT

- New effect is expected
- Promoting self-study
- Efficient administration
  
- Supporting system has to be easy to be used by all kind of users



# Digitize learning process

## ▀ Advance and personalize learning process with ICT

### ○ On-line distance education

- ▶ International distance education is effective
- ▶ Language learning, cross cultural communication
- ▶ New experience different from studying abroad

### ○ E-Learning

- ▶ Any time and any where self study
- ▶ Personalized learning
- ▶ Supporting tool for lectures

### ○ OCW

- ▶ Open and share teaching materials to public



## Significance of digitizing learning process

- Quality assurance of education(Promoting interaction in a classroom)
- Various experience(International distance education in English, interaction with foreign student)
- Deploy self study environment
- Advance and reduce administration task
- Reduce faculty burden



# Digitize teaching materials

## ▣ Lecture note by teachers

- Lecture based on the note
- Use blackboard

## ▣ Use OHP

- Lecture based on OHP
- Students cannot follow

## ▣ Use PPT on PC

- Deliver PPT material on paper
- Students copy the material downloaded from the server



# Classroom use of teaching materials

## ■ Exception of copyright

- The number of students is limited
- Education is public

## ■ Digitize and share teaching materials

- Out of copyright scope
- Fair use: Extension of classroom use
  - ▶ Only the students can download and copy the materials on the server



# OECD report

■ Giving Knowledge for Free: The Emergence of Open Educational Resources

■ OECD code 962007041P1

■ ISBN 9789264031746

■ Language English

■ Medium Paperback

■ Price ¥3,300

<http://www.oecdtokyo.org/pub/edu/962007041p1.html>



# Stream to open and share teaching materials

- One method of collective intelligence on WEB
  - New method generated in information society
  - Not option but mandatory
- Open source
  - New style of program development
  - Community source
- Open contents
  - Open course ware
  - Wikipedia

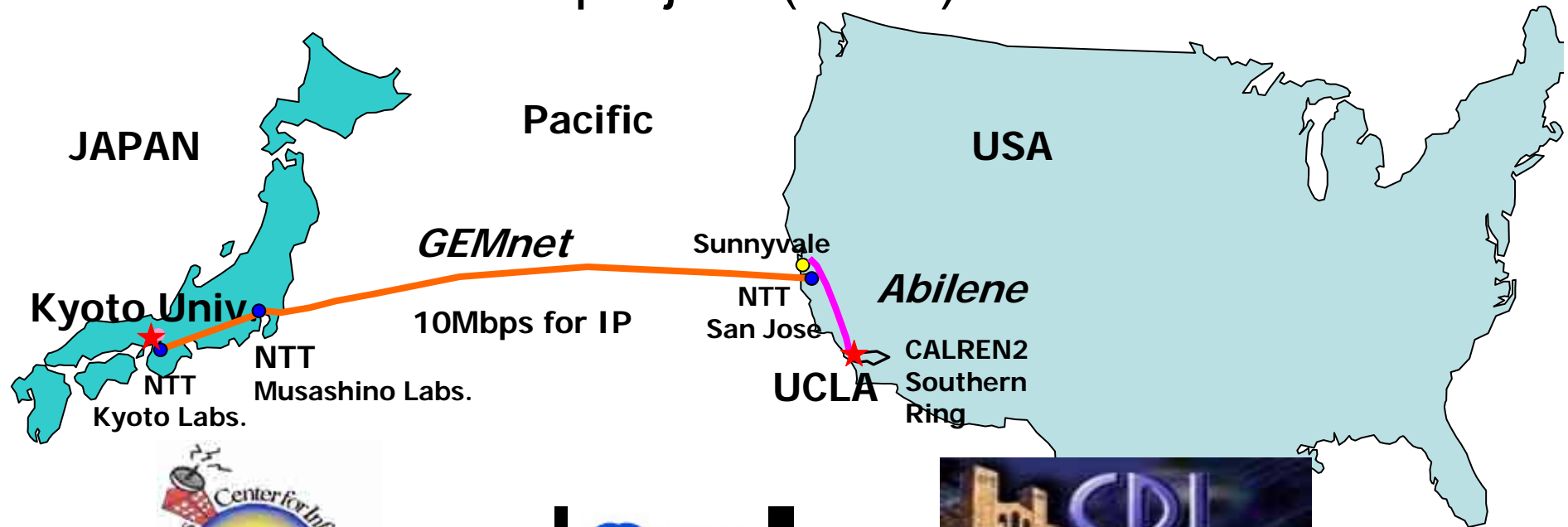


# Activities in Kyoto university

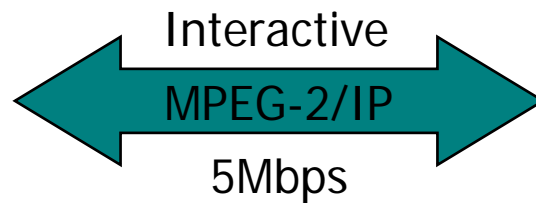




# Trans-pacific Interactive Distance Education project (TIDE)



Kyoto University



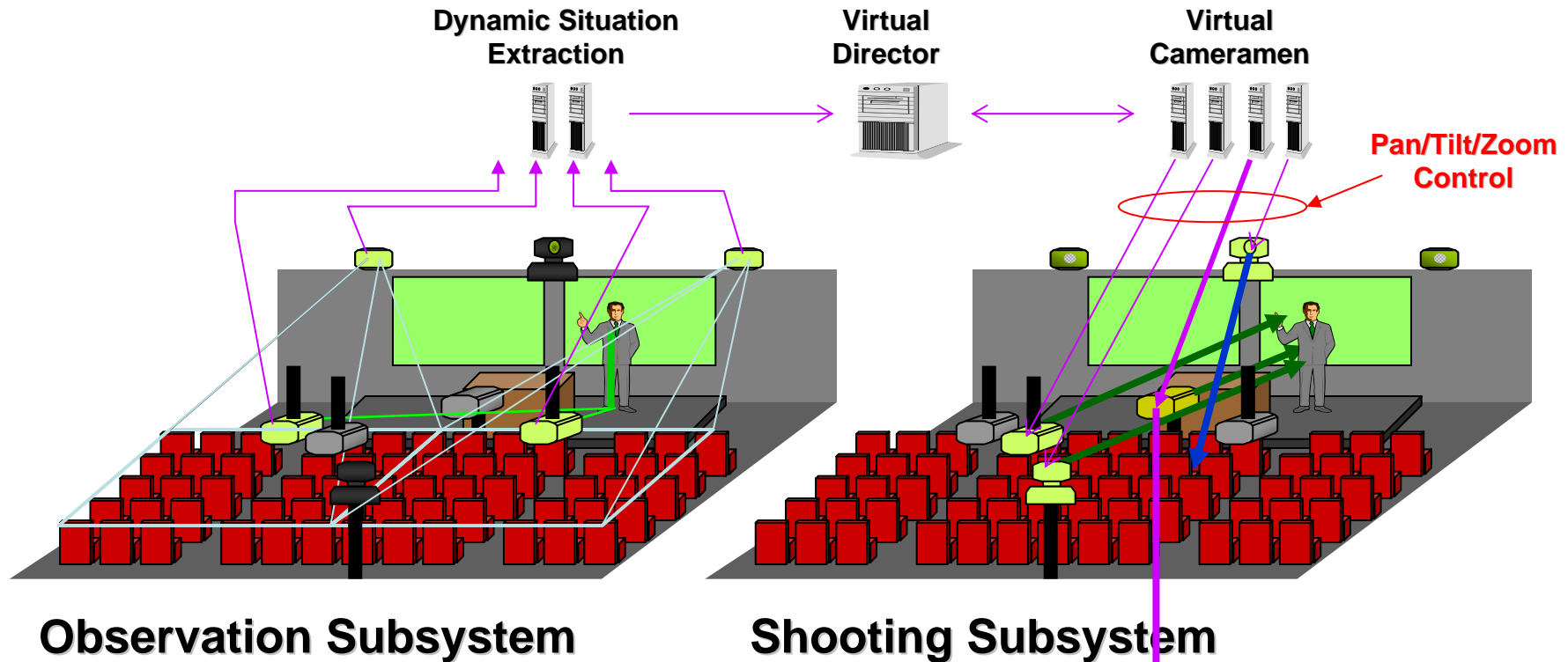
Economics (Spring)  
Modern Biology (Fall), 2001



UCLA



# Camera System

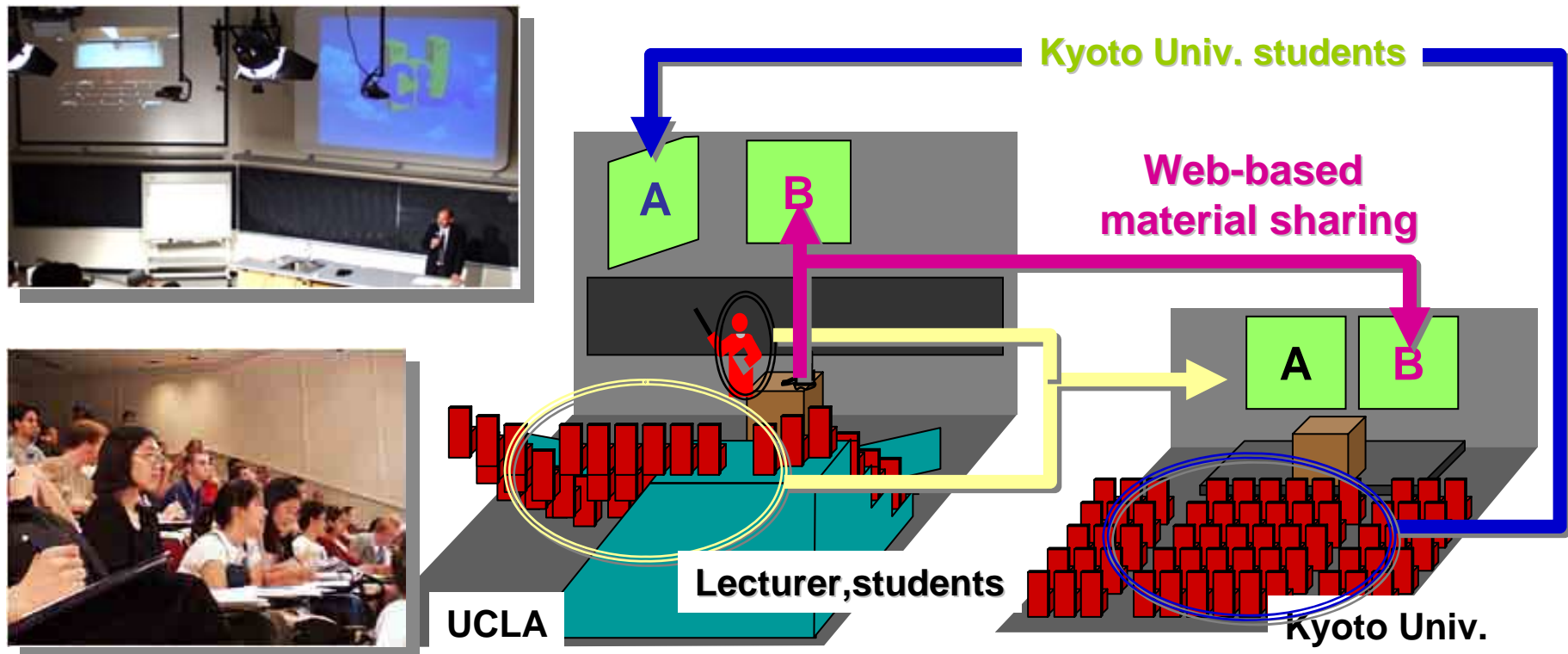


<http://www.cdi.ucla.edu/partners/kyoto/kyotoclass.html>



# Lecture System

Lecture from UCLA



MPEG-2 encoder/decoder: REIMAY series (NEL)  
<http://www.nel-world.com/products/system/index.htm>



## TIDE lecture list (1999 October~2002 March)

Period	Lecture title	Professors
1999 Fall	Space Science	松本紘、小嶋浩嗣、 臼井英之 Maha Ashour-Abdalla
1999 Fall	Physics for Poets	青谷正妥、渡邊正子 Robert Cousins
2000 Spring	情報メディア論／“Advanced Asia Media Systems”	美濃導彦、角所考 Tom Plate
2000 Fall	英語 II “How people learn languages”	出口康夫 Cheryl Fantuzzi
2001 Spring	日本の経済／“Strategic Factors of Japanese Economic Growth”	曳野孝 Dean Baim
2001 Fall	遺伝子・細胞からみた現代生物学／ “Molecular Biology: From Genes to Cells”	竹安邦夫 Jay Phelan



## TIDE lecture list (2002 April ~ 2004 March)

period	Lecture title	Professors
2002 Spring	遺伝子・細胞からみた現代生物学 “Introduction to Molecular Biology”	竹安邦夫 Robert Goldberg
2002 Fall	情報メディア利用と異文化交流／ “Impact of Communication on Education From Cross-cultural Perspectives”	美濃導彦、角所考、 村上正行 Steven M. Peterson
2003 Spring	コンピュータによる創造性支援、連携および協調／ “Creating, Connecting and Collaborating through Computing”	上林 弥彦 Alan Kay
2003 Fall	科学技術社会論入門／“Triple Helix: Universities /Industry /Government in 20th Century Science, Technology, and Medicine”	喜多千草 坂東昌子 Sharon Traweek
2003 Fall	分子遺伝学概論／“Genetic Engineering in Medicine, Agriculture, and Law”	竹安邦夫 Robert Goldberg



## TIDE lecture list (2004 April ~ 2005 August)

period	Lecture title	Professors
2004 Spring	創造・学習・コンピュータ / “How Children Will Finally Invent Personal Computing	喜多 一 Alan Kay
2005 Spring	創造・学習・コンピュータ / “Inventing Future, Again ”	喜多 一 Alan Kay



2003 Spring



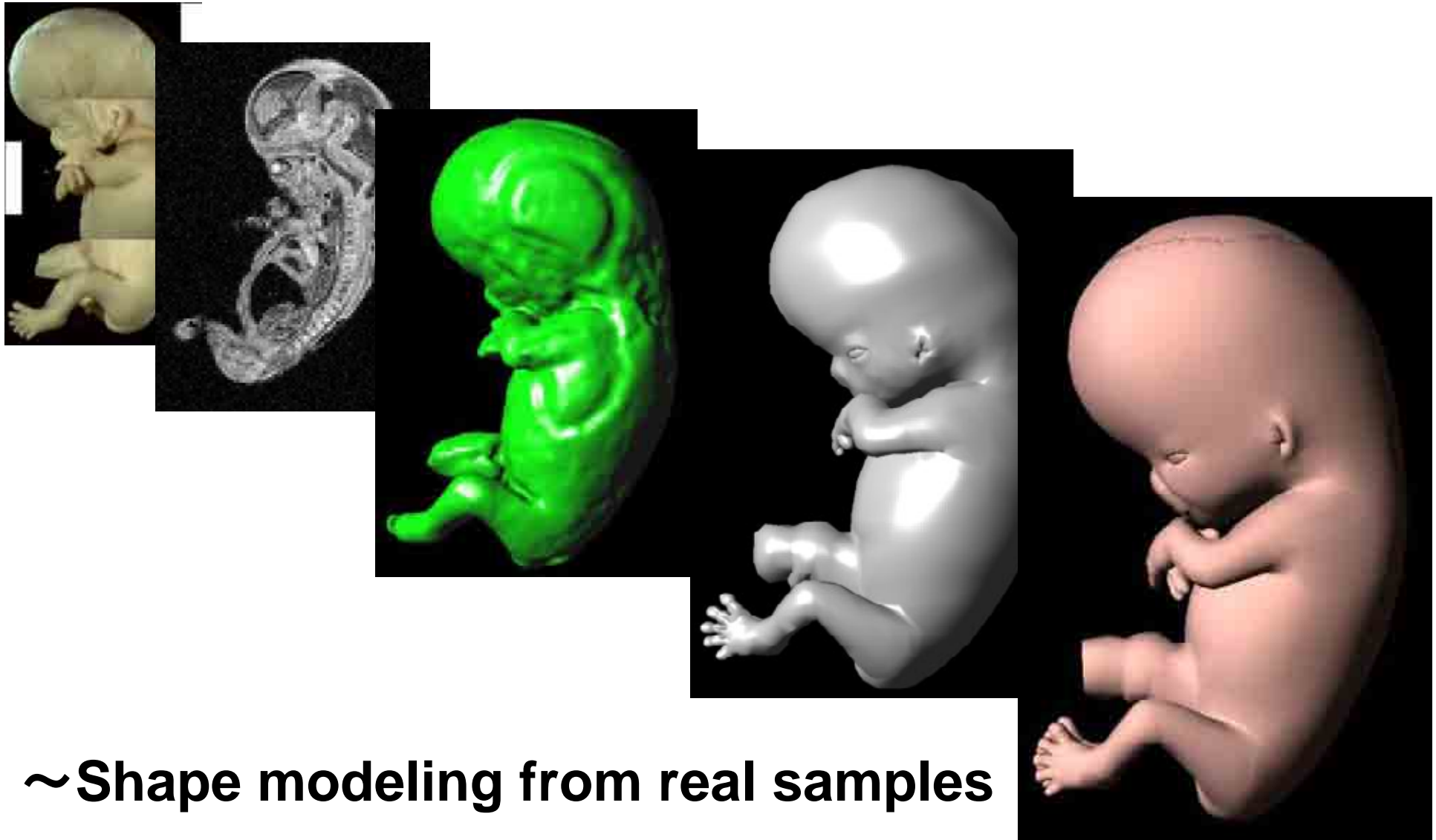
2003 Spring







## 3 dimensional CG animation for human embryo







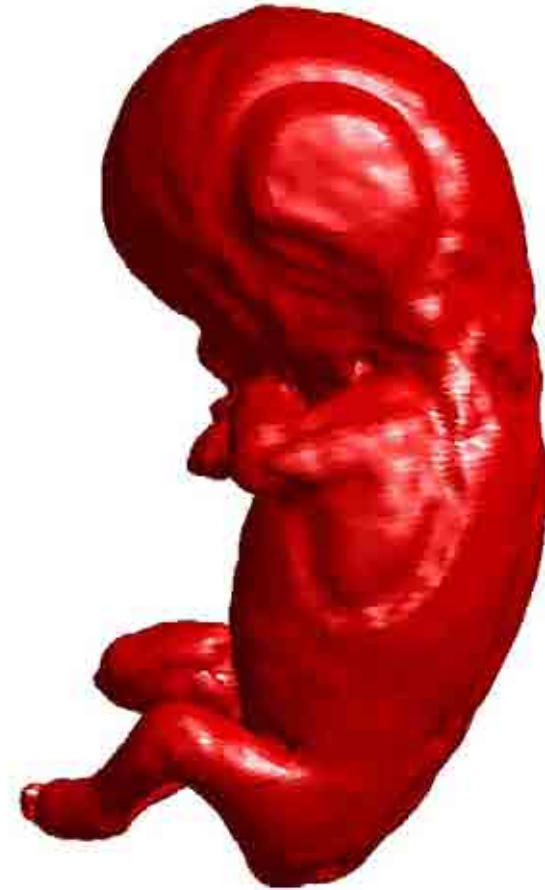
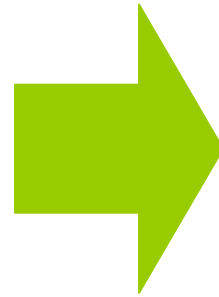
# MRM Data of Specimens

- Measurement range:  
around 3 (mm)
- Resolution:  
 $128 \times 128 \times 128$   
(voxels)
- Voxel size:  
 $50 \times 50 \times 50$  (mm)



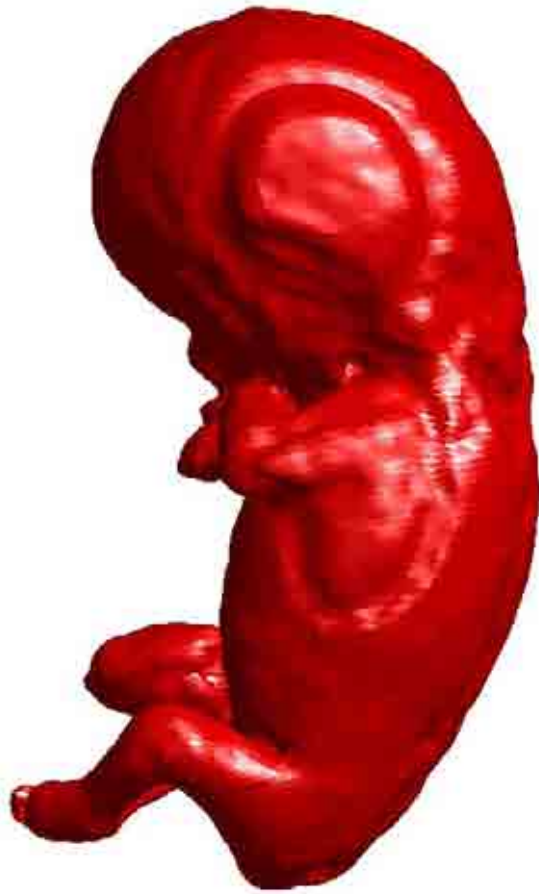


# Extracting Contours of MRM Data





# Modeling 3D Shapes from Contours





# Normalizing Individual Differences





**stage 1**  
**1 days**

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0.1mm



# Creation of teaching materials


The screenshot shows a web browser window displaying a teaching interface. The browser's address bar shows the URL: <http://www.minoh-lab.com/teaching/embryo/Stage13.html>. The page title is "The First Embryology". The main content area features a 3D anatomical model of a developing embryo, labeled with letters A, B, C, and D. The interface includes a navigation menu with "Lecture" (selected), "Quiz", "Images", "Glossary", and "Site Map". A progress indicator shows "Stage 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23". At the bottom, there are controls for "Sound (ON/OFF)", "other view", "help", "history", "other photos", and "Stage 13 Quiz".



Lecture | General Embryology | Carnegie stage 13

戻る 進む 中止 更新 ホーム 自動入力 プリント メール

アドレス: [http://www.media.kyoto-u.ac.jp/cpt/webtest/embryo/040819d/lecture/general/stage1\\_23/13/index.html](http://www.media.kyoto-u.ac.jp/cpt/webtest/embryo/040819d/lecture/general/stage1_23/13/index.html) 移動

  search

Lecture Quiz Images Glossary About Help Site Map

## General Embryology

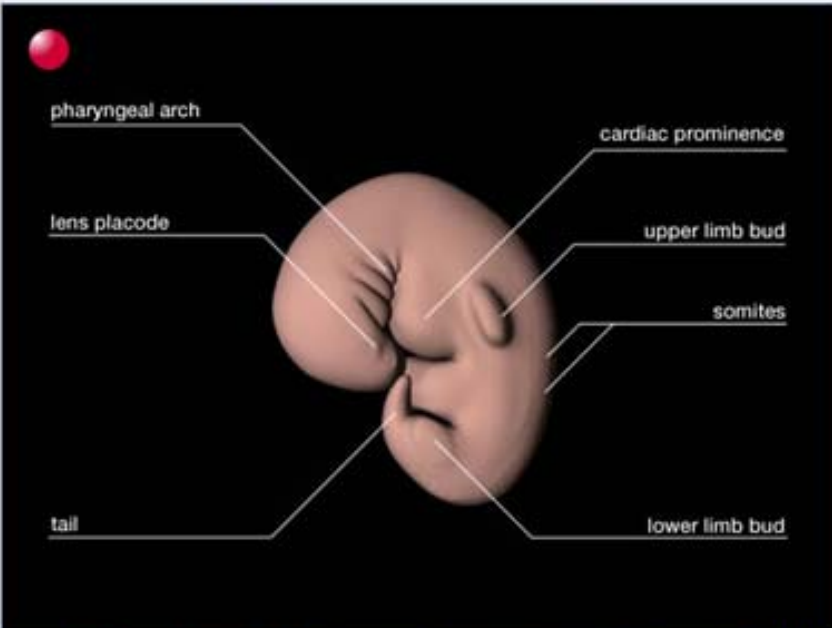
Carnegie stage 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

### Four limb buds, optic vesicle

28 days

4-5 mm

Two upper and two lower limb buds are visible. The optic vesicle is can be recognized and the lens placode begins to differentiate. The septum primum appears in the heart. The embryo has more than 30 pairs of somites, but the somite number becomes increasingly difficult to determine and is no longer used in staging.



pharyngeal arch

cardiac prominence

upper limb bud

somites

lower limb bud

tail

lens placode

Keyword Outline View 1 View 2 Face Limb Histology MRI Cases Quiz >>

Internet zone





Quiz | General Embryology | Carnegie stage 13

戻る 進む 中止 更新 ホーム 自動入力 プリント メール

**General Embryology**

Carnegie stage 1 2 3 4 5 6 7 8 9 10 11 12 **13** 14 15 16 17 18 19 20 21 22 23

Quiz : Fill in the blanks

a.

b.

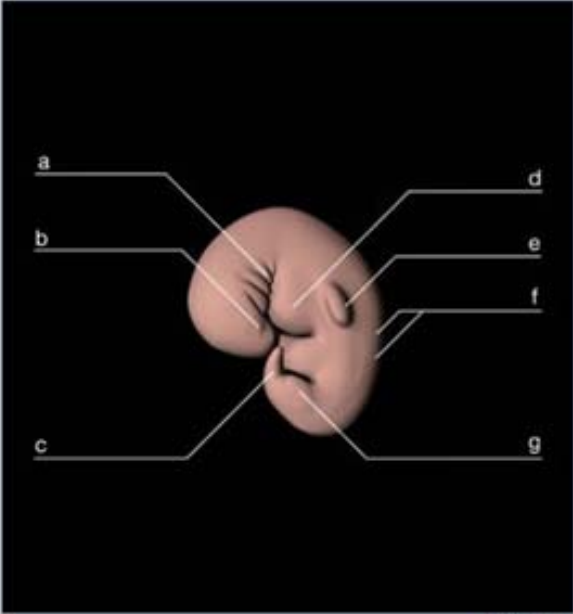
c.

d.

e.

f.

g.



[Lecture >>](#)


Internet zone





Quiz | General Embryology | Moderate

戻る 進む 中止 更新 ホーム 自動入力 プリント メール

 Clinical Embryology

Lecture Quiz Images Glossary About Help Site Map

## General Embryology

Multiple Choice Easy **Moderate** Hard

**Q4: X**

The external acoustic meatus develops from the:

- third pharyngeal (branchial) groove
- fourth pharyngeal (branchial) groove
- first pharyngeal (branchial) groove
- second pharyngeal (branchial) groove
- none of the above

**Q5: O**

Which of the following structures is derived from the surface ectoderm:

- somite
- lens placode
- notochord
- optic vesicle
- none of the above

Internet zone



# OCW@KU

ocw.kyoto-u.ac.jp

Top page of a lecture

Lecture plan

時間	内容	担当
09:00	植物の進化と多様性の概要	岡田 隆
09:30	植物の多様性の形成と進化	岡田 隆
10:00	植物の多様性の形成と進化 (2)	岡田 隆
10:30	植物の多様性の形成と進化 (3)	岡田 隆
11:00	植物の多様性の形成と進化 (4)	岡田 隆
11:30	植物の多様性の形成と進化 (5)	岡田 隆
12:00	植物の多様性の形成と進化 (6)	岡田 隆
12:30	植物の多様性の形成と進化 (7)	岡田 隆
13:00	植物の多様性の形成と進化 (8)	岡田 隆
13:30	植物の多様性の形成と進化 (9)	岡田 隆
14:00	植物の多様性の形成と進化 (10)	岡田 隆
14:30	植物の多様性の形成と進化 (11)	岡田 隆
15:00	植物の多様性の形成と進化 (12)	岡田 隆
15:30	植物の多様性の形成と進化 (13)	岡田 隆
16:00	植物の多様性の形成と進化 (14)	岡田 隆
16:30	植物の多様性の形成と進化 (15)	岡田 隆
17:00	植物の多様性の形成と進化 (16)	岡田 隆
17:30	植物の多様性の形成と進化 (17)	岡田 隆
18:00	植物の多様性の形成と進化 (18)	岡田 隆



# History of OCW@KU

2004 Preparation of OCW@KU project

2005 Starting OCW@KU project

Copyright related documents and guide line of OCW utilization

2006 International conference on OCW at Kyoto university

Held OCW Symposium for users and teachers

Introduced OCW Content Management system :eduCommons,

Held the seminar on Introduction of Plone programming

2007年 President meeting for teachers at Kyoto university

2008年 Collaboration with GOOGLE and make KU channel at YOUTUBE

2009年 connect to university certification system



## International conference on OCW 2006

- 400 researchers participation
- Opening Session: Introduction of OCW by MIT
- Panel Discussion of Japanese OCW
- Presentation of 9 prominent Japanese universities
- Panel Discussion of OCW by Europe, Asia, and United States

(MIT, Tufts University, Utah State University, Universia, OpenUniversity UK, ParisTech, China: CORE)



# OCW@KU now

- 80000 access / month
- 403 video contents (Lecture, GCOE, teaching materials, seminars)
- Upload international conferences hosted by Kyoto university and open lectures
- Upload English lectures
- International media of education
- Starting secondary use of OCW contents
  - Example 1: OCW Video is used for English lecture at KU
  - Example 2: Translation company use OCW contents for training members



# OCW@KU number of contents

## <Video contents>

lecture in Japanese 116

Teaching materials 40

Open lecture, international conferences 96

lectures in English or French (open lecture, international conferences) 116

lectures on language English and Chinese 25

University ceremony 10

## <regular lectures>

lectures in Japanese 123

lecture archives 16

lectures in English 16

lecture archives of English lectures 1

Number of professors participated 150



# YOUTUBE OCW@KU channel

The screenshot shows the YouTube channel page for 'KYOTO-U OPENCOURSEWARE'. At the top, there is the YouTube logo, a language dropdown set to 'English', and navigation links for 'Videos', 'Channels', 'Community', and 'Upload'. A search bar is also present. The channel banner features the Kyoto University logo and the text 'KYOTO-U OPENCOURSEWARE KYOTO UNIVERSITY' next to a stylized graphic of vertical bars. Below the banner are navigation tabs for 'Videos', 'Playlists', 'Groups', 'Subscribers', and 'Subscriptions'. On the left, the channel's profile information is displayed, including the name 'KyoDaiOcw', join date 'March 05, 2008', and subscriber/view counts. A 'Subscribe' button is visible. Below this is a section for connecting with the channel, offering options like 'Send Message', 'Add Comment', 'Share Channel', and 'Add to Google+'. The main video player area shows a video of a building with a clock tower, with a progress bar at the bottom indicating 00:19 / 15:15.

English

Sign Up | QuickList | Help | Sign In

YouTube

Videos | Channels | Community | Upload

Search

KYOTO UNIVERSITY  
FOUNDED 1897

KYOTO-U OPENCOURSEWARE  
KYOTO UNIVERSITY

Videos | Playlists | Groups | Subscribers | Subscriptions

KYOTO-U OCW

Subscribe

KyoDaiOcw

Joined: March 05, 2008  
Last Sign In: 2 hours ago  
Subscribers: 1,350  
Channel Views: 53,686

Name: OpenCourseWare  
Hometown: Kyoto  
Country: Japan  
Website: <http://ocw.kyoto-u.ac.jp/>

Connect with KyoDaiOcw

Send Message  
Add Comment  
Share Channel  
Add to Google

<http://www.youtube.com/KyoDaiOcw>

00:19 / 15:15





# Well known Professors' OCW

日本で最初にノーベル賞を受賞された  
湯川秀樹先生のオープンコースウェア

湯川秀樹先生のノーベル賞受賞式の様子が写った写真が掲載されています。

・ 出版「京都大学基礎物理学研究所湯川記念教室」

・ 解説 九條 太一 教授 (京都大学基礎物理学研究所所長)「中間子の予言」

What is Life?  
The Next 100 Years of Yukawa's Dream  
村瀬 雅俊 准教授 (基礎物理学研究所)

近代日本最初の独創的哲学：京都学派を築いた  
西田幾多郎先生のオープンコースウェア

「日本文化の問題」講演  
昭和13年(京都大学にて)

・ 岩波新書「日本文化の問題」(手書き原稿)  
・ 提供「京都大学文学部図書館」

・ 解説 藤田 正助 教授 (文学研究科) 西田幾多郎の思想：「日本文化の問題」をめぐって





# Consideration & Conclusion

- Promote to open and share teaching materials
  - OCW is suitable media
  - Need incentive for professors
  - Cope with copy right problems
- Make use of opened teaching material
  - Sustainable education
  - Continuing education
- New style education in information society
  - Not classroom style
  - Net oriented education?



# References

Kyoto University OpenCourseWare

<http://ocw.kyoto-u.ac.jp/>

Kyoto University OpenCourseWare YouTube

<http://www.youtube.com/user/KyoDaiOcw>

OCW Content Management System

<http://educommons.com/downloads/educommons/>