Kobe Institute of Computing

K I C

Kobe Institute of Computing

Graduate School of Information Technology
Department of Information Systems

KIC Develops IT Proffesionals

Kobe Institute of Computing; Graduate School of Information Technology is the school to develop creative human resources with expert knowledge and skills.

Kobe Institute of Computing (KIC) is opened in April 2005 to develop IT professionals. KIC educational program is suitable for all students' purposes. Start form the beginning, step up to advanced and get all knowledge and skills needed as IT professionals such as IT- architects, project-managers, embedded-engineers, etc.

We have classes not only in the daytime but also at night and on Saturdays. Now many students including working-students and foreign-students are studying here.

Contents

Current Situation in IT world

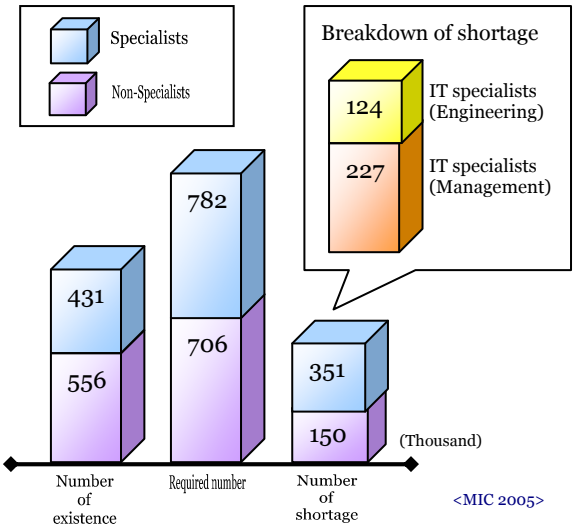
Suffering a shortage of qualified IT professionals
The number is five hundred thousands
Strong support of Graduate school reform is coming from the government

Graduate schools are being required to respond to new challenges posed by, among others, economic globalization, accelerating scientific and technological progress, and the need for more powerful government and business technology strategies. While the schools long focused mainly on basic research and researcher training, they are now being called on to reeducate practicing professionals and train experts.

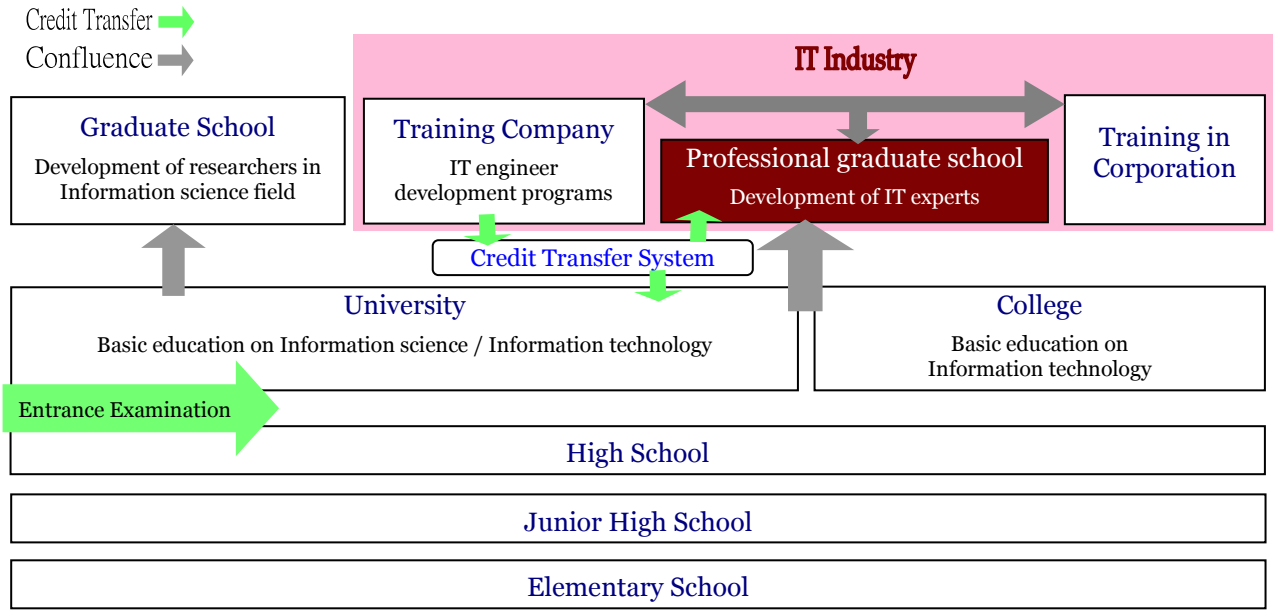
The standards for establishing graduate schools were therefore revised in 1991 and measures have since been taken to expand, enrich and diversify graduate education.

A professional graduate school program was launched in 2003. Unlike the traditional graduate schools, these schools are for training practicing professionals and 30% of their faculties are therefore experienced professional people. Graduates receive a professional degree directly related to a profession in the business or industrial sector.

The current state of IT professionals



A Picture of The Future in IT Educational World



KIC Has Three Educational Concepts

Acquire practical expertise and skills
From basis to advanced and be able to use them on practice

Industrial world of today require practical persons, in other words, work-ready persons.
Many faculties of KIC are experienced professional people. They provide very practical education that is useful industrial world through group works and pseudo-projects. KIC also uses Open Source Software (OSS) as a material. The source code and certain other rights of OSS such as Linux are provided. Using OSS as materials develops IT professionals who can understand inner-workings of systems deeply.

Improve cooperative skill and management skill
Study how to cooperate and manage through group works and pseudo-projects

IT projects are working on teams with varied backgrounds, ages, and characters. Communication ability, presentation skill, and management skill are very important on team works. KIC emphasizes these skills preserving good human relations.

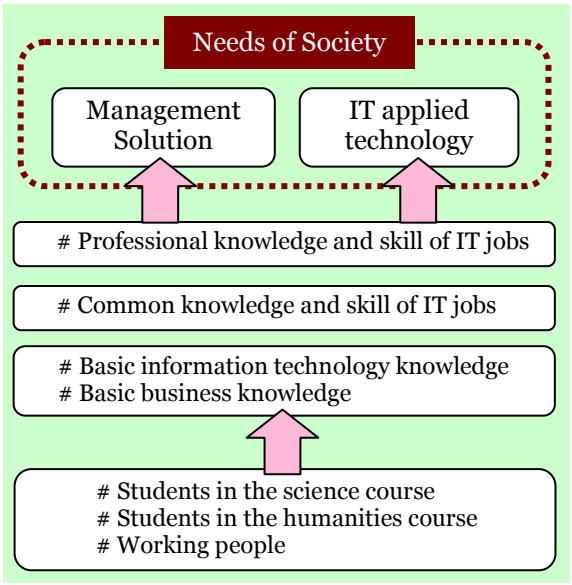
"Active and Creative" Fostering of creative human resources

KIC's motto is to develop creative human resources with expert knowledge and skills. Creative human resources must have clear thinking. KIC develops problem-solving skills through creative thinking. Creative skills and self-expression ability. KIC develops human resources who can gather the necessary information, make original ideas out and tell them correctly.

Development of Human Resources

KIC develops creative human resources with expert knowledge or skills

KIC develops not mere IT technical experts but IT professionals with abilities of communication and personal growth witch are necessary for professionals standing at the frontline for long time.



The type of job to do **********

IT Architect

Design IT architecture keeping good quality of information systems to make a customer's business strategy come true.

Project Manager

Have the responsibility of the planning, execution, and closing of any project, typically relating to construction industry, architecture, computer networking, or software development.

IT specialist

Design, develop and introduce the most suitable information systems for customers.

Application Specialist

Design, develop, maintenance and repair applications to solve the customer's problem.

Software Developer

Be concerned with facets of the software development process wider than design and coding, a somewhat broader scope of computer programming or a specialty of project managing including some aspects of software product management.

Curriculum on Job

Short-Term 6-semesters
From basic knowledge to advanced skill

KIC takes 6-semesters so that each subject is within 2 months. First knowledge is given in a lecture and then a practicum is held to use that knowledge in practice. This is very effective to get knowledge and skill within a limited time.

The First Term	The Second Term
Lecture Get the knowledge	Practicum Use the knowledge

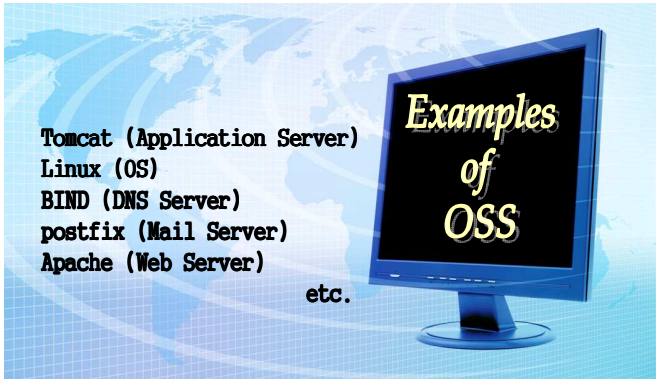
One term is about for 2 months.

Simulated experience through virtual projects

KIC actively takes group works on classes and research studies to learn how to develop software on real job. KIC has many kinds of student; various ages from 22 to over 50, different occupational fields, different nationalities.

Use OSS as a material

The source code and certain other rights of OSS (Open Source Software) are provided meaning that the users can use, change, and improve the software, and redistribute it in modified or unmodified forms.
Using OSS as materials makes the students understand inner workings of systems deeply.
Now OSS is highly valued in the world. In 2005 Japanese government has decided to encourage schools to actively use OSS in classes to grow IT professionals.



Strong Support System

Open until night on weekdays and Saturdays

KIC would like to provide more chances to anybody who wants to study. KIC'S course hours are from 9:20 to 22:10 on weekdays and to 16:40 on Saturdays. The school opens from 8:00 to 22:30 on weekdays and to 19:30 on Saturdays. The students can use laboratories, study rooms (each student is provided the individual desk in the study rooms) and a library freely during the school opening hours.

Course Hour

		Mon - Fri	Sat
1	9:20-10:50		
2	11:00-12:30		
3	13:30-15:00		
4	15:10-16:40		
5	16:50-18:20		
6	19:00-20:30		
7	20:40-22:10		

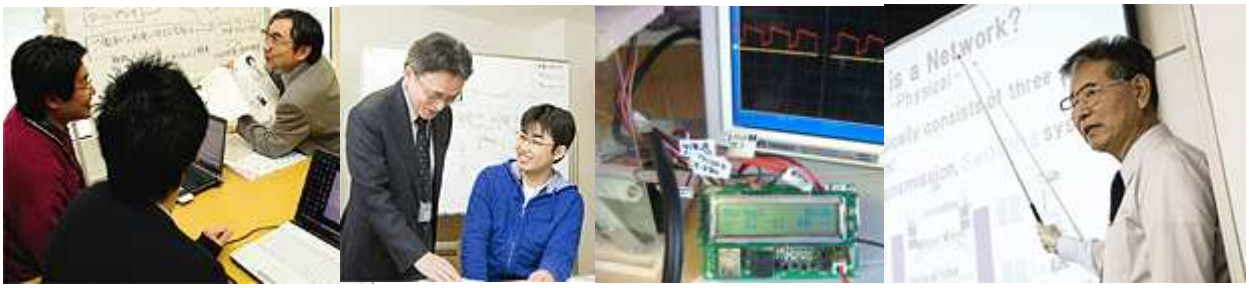
Daytime classes Nighttime classes

Reinforce Learning with e-Learning (WBT: Web Based Training)

The students can use e-Learning freely not only at school but also at home and office again and again.
The e-Learning has 51 courses so that the students study whatever they want to. The courses are very various from IT to business such as "Basic Computer System" and "Communication Skill".

Professional people and Academic Experts

KIC is proud of its faculties consisting of professional people and academic experts.
Professional people teach practical know-how and the most advanced technology in the recent IT world.
Emeritus professors from renowned universities provide guidance in academic research including academic research papers and conference presentations.



Various Extra Lessons

Special Lectures and Seminars

KIC holds special lectures by specialists from various field regularly for new information and trends. KIC also hold specials seminars aiming the student's personal growth.

Examples of Special Lectures

* The first wave of digital appliance development ~ in a case of SONY ~
* Information-technology-related patent
* Practical communication skills etc.

Examples of Special Seminars

* Mind-Map workshop
* Photo-Reading workshop
* Self Public Relations seminar etc.

After School Enrichment

The assistant professors hold some special classes considering the students' learning context or as the students required.

Examples of special classes

* XMLDB Special Class
* Troubleshooting Technique
* Basic Course in System Development etc.

3 Steps Curriculum Design

Basic Area

Learn the basics of information technology and business.

Specialized Area

Consist of four areas:OSS, Network, Information Architecture, Programming. Get the specialized knowledge and skills.

Research Activities

Practice makes perfect. Put into practice acquired knowledge and skills through the research activities.

Basic Area

Learn the basic knowledge for information systems and software development.
Not only that, but also e-Business lecture and a class to boost English communication ability are provided.

Subjects

Basic Theory of Information Networks
Basic Theory of Information Security
Introduction to e-Business
Basic Theory of Software Engineering
Basic Theory of OSS
Basic Theory of Computer Systems
Introduction to International Communications

Specialized Area

OSS Area

Learn about Linux which is the most common OSS from basic to professional.
The courses are on the control methods of files, memories, networks and so on, Open Journal Systems, SMP System, and typical Linux distribution.

Subjects

Advanced OSS Application 1
Advanced Exercise in OSS Application
Advanced Exercise in OSS Structure
Advanced OSS Application 2
Advanced OSS Structure

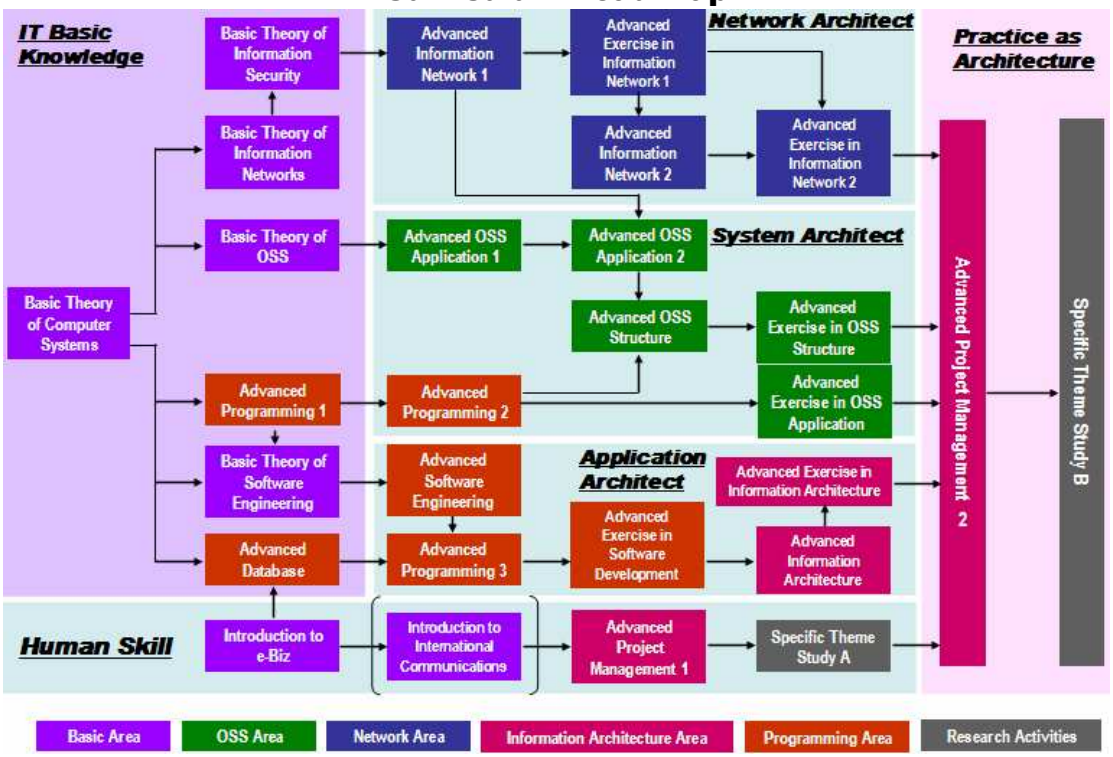
Network Area

Acquire various network technologies such as TCP/IP, design, protocols, security, encryption, servers and so on.

Subjects

Advanced Information Network 1
Advanced Exercise in Information Network 1
Advanced Information Network 2
Advanced Exercise in Information Network 2

Curriculum Road Map



Information Architecture Area

Study how to operate projects effectively. Learn the knowledge and skills to be an information architect such as quality control, business management, and man-hour control.

Subjects

Advanced Project Management 1
Advanced Project Management 2
Advanced Information Architecture
Advanced Exercise in Information Architecture

Programming Area

Study various knowledge and skills to be able to construct programs and databases on UNIX / Linux. Also learn about various applications which are needed at a working level.

Subjects

Advanced Programming 1
Advanced Programming 2
Advanced Programming 3
Advanced Database
Advanced Software Engineering
Advanced Exercise in Software Development

Research Activities

KIC provides various research styles. Academic research for master's thesis, action research with multiple people, and internship at the faculty's job. All research styles aim to grow not only IT skills but also abilities to be a member of society such as document creation, solving problems, communicating and so on.

Subjects

Specific Theme Study A
Specific Theme Study B

Dr. Takeshi TAMURA

Doctor of engineering, Professor emeritus at Osaka Prefecture University

■ **EMPLOYMENT HISTORY**
- KDD (Now: KDDI)　senior researcher, Professor at Osaka Prefecture University

■ **ACADEMY**
- Institute of Electronics, Information and Communication Engineers; Member of Technical Group on Education Technology
- The Japan e-Learning Association; Executive Board Member
- OSDL (Open Source Development Lab); Academic Affiliate Member

■ **RESEARCH THEME**
- Research and development of e-Learning system having the function of project management
- Research and development of how to build a learning community with P2P communication
- Research and development of the collaboration system with SIP (Session Initiation Protocol)

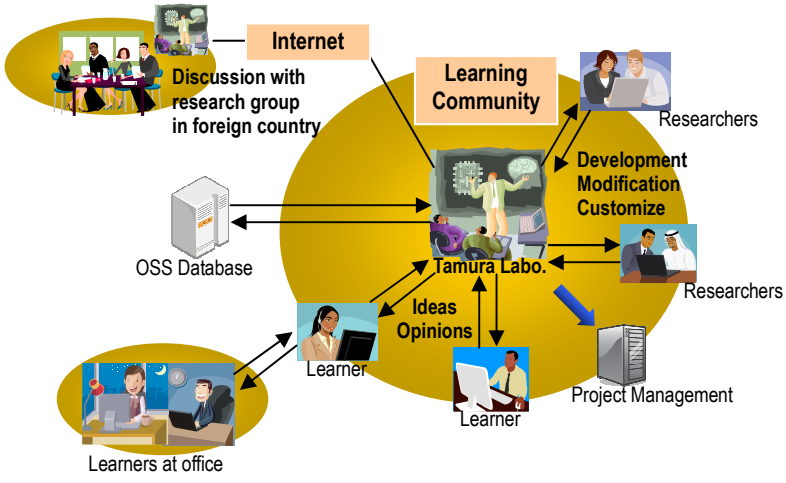
Contribute to global society by developing social system using OSS development method

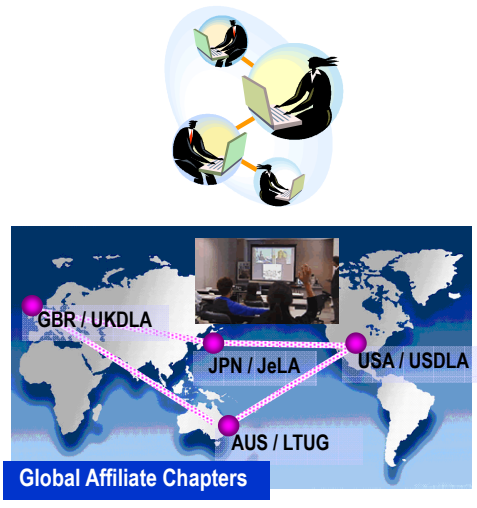
One representative example of OSS development method is OSC (Open Source Community). Members in OSC cooperate to make software better and better. This laboratory takes OSC style. We are also interested in P2P (Peer-to-Peer) which is the new style communication method without a server. The main research theme is regarding “Learning Community” such as “Next-Generation e-Learning system”.

Work on the global network cooperating with engineers in foreign countries

We are the member of GAS (Global Affiliate Chapters).
We exchange information on e-Learning and remote lecture with other GAB members in USA, GB, and Australia by multipoint videoconferencing.

R & D Environment





Mr. Hitoshi KOYAMA

Management consultant, IT architect

■ **EMPLOYMENT HISTORY**
- IBM Japan, SAP Japan, Honorary advisor at Global Knowledge Network
- The CEO of ebits-brain (At present)

■ **ACADEMY**
- Business Model Association, IT coordinators Association
- Information Systems Society of Japan

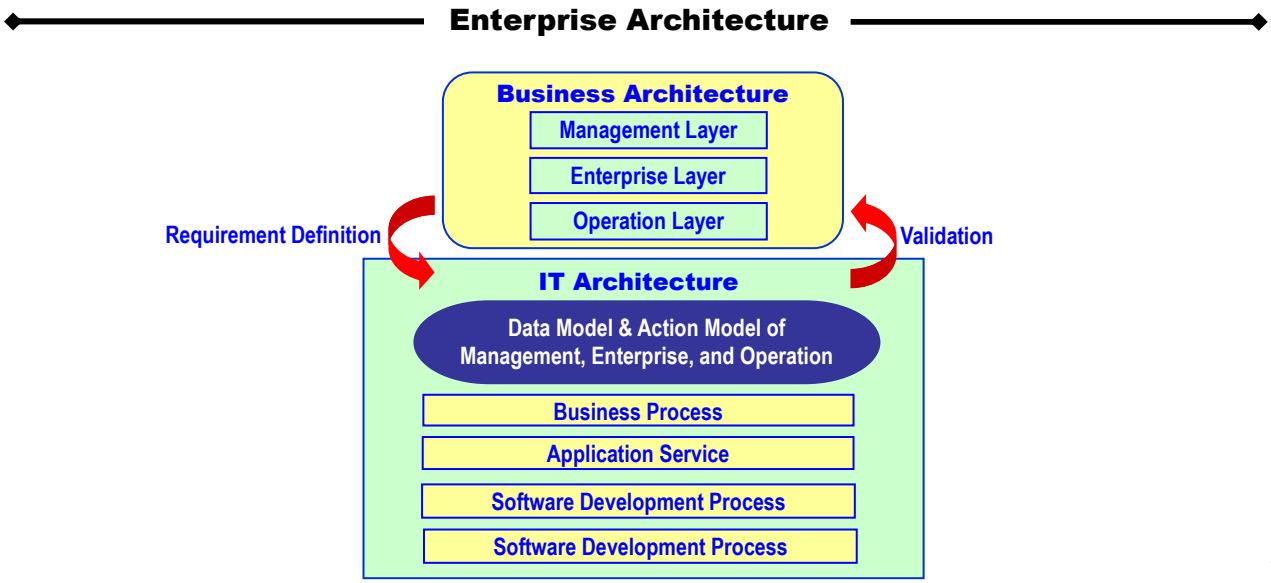
■ **RESEARCH THEME**
- Establishment of IT architecture model and its design notation
- Development of solving problems technique

Start own business by utilizing OSS

Study on how to build the useful OSS system environment, and create a mechanism of OSS network computing easily accessible to any end-users.
We also study about design of information system architecture by UML (Unified Modeling language). The main purpose of this laboratory is to foster creative human resources capable of become entrepreneurs.

Acquire resourcefulness at problem solving and create a more affluent society

What to grow is not creative ability. It is problem-solving techniques. Understand the present situation and find out the problems. What is important is to make out the greatest way of resolving the problems, which requires broader knowledge and understanding. It is to strengthen to educate what IT architect needs through research guidance at this laboratory.



Dr. Sandor MARKON

Doctor of engineering
Specialist in elevator systems; simulation, control, supervisory, etc.

■ **EMPLOYMENT HISTORY**
- Executive board engineering official member at FUJITEC CO., LTD.
- Guest Researcher of National Institute of Information and Communications Technology (At present)

■ **ACADEMY**
- The Institute of Systems, Control and information Engineers; Councilor
- IEEE (The Institute of Electrical and Electronics Engineers, Inc.); Accredited member

■ **RESEARCH THEME**
- New human interface with floating images
- Embedded systems with OSS
- Simulation and optimization

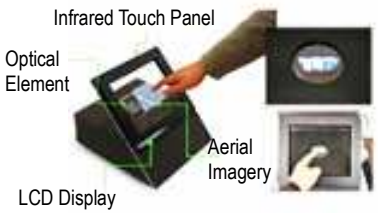
Begin with Code reading,and then work up to acquire perfect programming skill

Code reading is the basic skill for programming, so all computers at this laboratory are UNIX only. Program languages we handle encompass a spectrum ranging from C++ to Common Lisp and Erlang. Aim to acquire the skill of bug-free programming and confidence.

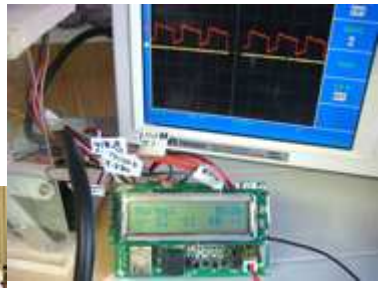
Work on the embedded system which Japan can be proud of

We design and develop OSS embedded software with microcomputer boards. We also work on construction and operation of agent-based simulation system, and research of simulation-based optimizing practically.
We are planning to release our achievement as OSS widely and set up the open project team.

Markon Laboratory



Aerial Imagery Touch Display



Dr. Mitsuhiro KUWANO

Doctor of Science, System consultant, Project manager

■ **EMPLOYMENT HISTORY**
- E Fujitsu co., ltd.; development of UNIX karnel
- Kobe Digital Lobo (KDL); Executive fellow

■ **ACADEMY**
- European Organization for Nuclear Research (CERN); Research on elementary particle physics

■ **RESEARCH THEME**
- Hardware (robots, network) with "Realtime Linux"
- e-commerce telegraph style (using XML) for various industries

Computer development meeting social needs

The main theme is to make IT equipped for working world. I implement an internship at KDL as part of research guidance to make students to acquire useful knowledge in working world and practical sense. There is an opportunity to take part in R&D projects cooperating with other companies or government.

Cultivate useful abilities for job; communication ability and document preparation ability

It is important to cultivate skill to find out problems and requirements through conversation with customers. Document such as requirement definition documents and specifications preparation ability is also important on job. Since it is very hard to solve the troubles or issues caused by the environments around the system, we deepen understanding of "environments". We aim to become professionals who can catch the customers' needs and reply to them with IT.

Kuwano Laboratory

Mr. Toru AKAMATSU

- Improve the network environment by OSS.
- Develop IT professionals who can understand the network protocol.

Mr. Hidetoshi FURUKAWA

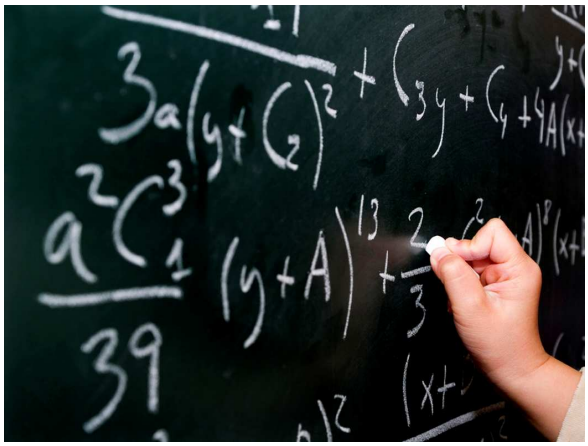
- Have experiences in many different development processes through preudo- projects.
- Develop capable project managers.

Mr. Katsuhiko SUDOH

- Teach the joy of imagination and creation through practice with OSS.
- Develop the all round players who are skilled in whole field of IT.

And Others

Dr. Fujiichi YOSHIMOTO
Dr. Motoyasu NAGATA
Mr. Tetsuo TAKATA
Mr. Fernando VAZQUEZ
Mr. Kiyoshi TAKANO
Ds. Noriko ETANI



More About KIC

Well-resourced Education System for High quality IT education

Industrial world of today require practical persons, in other words, work-ready persons.
Many faculties of KIC are experienced professional people. They provide very practical education that is useful industrial world through group works and pseudo-projects. KIC also uses Open Source Software (OSS) as a material. The source code and certain other rights of OSS such as Linux are provided. Using OSS as materials develops IT professionals who can understand inner-workings of systems deeply.

Contribution to society

Free network seminar for general public is held in each month by Mr. Toru AKAMATSU who is one of our faculties and a specialist in Linux and Network.
We also hold lectures or discussion meeting on IT inviting notable scholars and well-known businessmen.
Academic lecture on e-Learning and Mind-Map seminar were held at our campus.

President Dr. Hatsukazu TANAKA

- Doctor of engineering
- Professor emeritus at Kobe University
- Guest lecture at University of Toronto
- Specialist in cryptography and security system
- IEEE fellow member

KIC education philosophy is "Active and Creative"

What is needed for development of high quality human resources is the education to acquire the habit of thinking. Thinking leads you to act and to create. We will teach not only technique but also how to. We welcome any people having strong sense of purpose.

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Department of Information Systems

http://www.kic.ac.jp

- Degree: Master of Science in Information systems (Profession)
- Standard courses: Two Years of Study
- Limited Number of Enrollment: 30
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