

3. ミニッツ(英語)

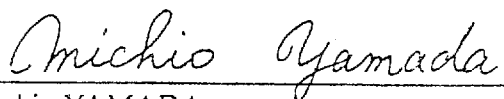
MINUTES OF MEETING
BETWEEN
THE JAPANESE IMPLEMENTATION STUDY TEAM
AND
THE AUTHORITIES CONCERNED OF THE GOVERNMENT OF
THE REPUBLIC OF TURKEY
ON
JAPANESE TECHNICAL COOPERATION
FOR
THE PROJECT ON ESTABLISHMENT OF INDUSTRIAL AUTOMATION
TECHNOLOGIES DEPARTMENTS
IN ANATOLIAN TECHNICAL HIGH SCHOOLS

The Japanese Implementation Study Team (hereinafter referred to as "the Team") organized by Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by Michio YAMADA, visited the Republic of Turkey for the purpose of working out the details of the technical cooperation program concerning the Project on Establishment of Industrial Automation Technologies Departments in Anatolian Technical High Schools (hereinafter referred to as "the Project") in the Republic of Turkey.

During its stay in the Republic of Turkey, the Team exchanged views and had a series of discussions with the Turkish authorities concerned.

As a result of the discussions, the Team and the Turkish authorities concerned agreed to summarize the matters referred to in the document attached hereto as a supplement to the Record of Discussions.

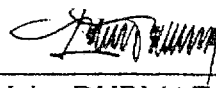
Ankara, October 12, 2000



Michio YAMADA

Leader,

Japanese Implementation Study Team,
Japan International Cooperation Agency,
Japan



Naim DURMAZ

Director General of the
Technical and Vocational
Education Directorate,
Ministry of National Education,
Republic of Turkey

THE ATTACHED DOCUMENT

The discussions held between JICA and the Turkish authorities concerned were held at Ankara in Turkey with the participants listed below:

Turkish Side	
Ministry of Education	
Naim DURMAZ	Director General of Technical and Vocational Education Directorate
Mehmet ÇAKIREL	Deputy Director General
Erol BELCE	Head of Department
İbrahim DEMİRER	Director of International and Bilateral Projects Section
Osman YILDIRIM	Director of Curriculum Development Section
Japanese Side	
JICA Office in Ankara	
Toru NAITO	Assistant Resident Representative
Timur SAYRAÇ	Head of the Technical Cooperation Division
Team	
Michio YAMADA	Leader, Director of the Vocational Education Division, Elementary and Secondary Education Bureau, Ministry of Education, Science, Sports and Culture
Yoshio SATO	Technical Education, Senior Curriculum Specialist for Industrial Education, Vocational Education Division, Elementary and Secondary Education Bureau, Ministry of Education, Science, Sports and Culture
Yasuo SUZUKI	Educational Planning, Senior Advisor, JICA
Tomizo YAMAUCHI	Planner for Curriculum and Equipment (Information Electronics), Teacher, Shizuoka Prefectural Fujieda North High School
Satoshi TOYAMA	Planner for Curriculum and Equipment (Information Machinery), Teacher Consultant, Educational Information Division, Gunma Prefectural Education Center
Mitsuko KUMAGAI	Cooperation Planning, Deputy Director, Second Technical Cooperation Division, Social Development Cooperation Department, JICA

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I. PROJECT INPUT BY THE JAPANESE SIDE

1. Dispatch of Japanese Experts

Both the Team and the Turkish side confirmed that the official request form, namely the A-1 form, required for the assignment of Japanese long-term and short-term experts during the term of technical cooperation will be submitted by the Turkish side by December, 2000. Long-term experts will be dispatched to establish sub-departments and sub-divisions, which are shown in the following chart.

Industrial Automation Technologies Department	Information Electronics Sub-department	Industrial Product Design Sub-division
		Network Design for Automatic Control Sub-division
	Information Machinery Sub-department	Automatic Production Technology Sub-division
		Factory Automation System Technology Sub-division

2. Provision of Equipment

The list of main equipment that is necessary to implement the Project is shown in ANNEX I.

Both the Team and the Turkish side confirmed that the official request form, namely the A-4 form, required for provision of equipment will be submitted by the Turkish side after consultation between the Turkish authorities concerned and the Japanese expert team.

The Turkish side agreed that it will take necessary measures, in coordination with the relevant authorities, for the passage through customs of the equipment provided by the Government of Japan without delay. The Ministry of National Education will be responsible for the proper documentation and clearance of the delivered equipment at the port of entry, as well as be responsible for the proper administration of the equipment provided for use while ensuring appropriate utilization and maintenance for the implementation of the Project.

3. Technical Training of Counterpart Personnel in Japan

Counterpart personnel will receive training in Japan according to the annual work plan of the Project within the limits of the budget allocated for technical cooperation. The official request form, namely the A2A3 form, required for training in Japan will be submitted by the Turkish side by June 2001.



II. PROJECT INPUT BY THE TURKISH SIDE

1. Assignment of Personnel

With reference to Item 6 (1), Article III of the Record of Discussions, the Turkish side agreed that an appropriate number of full-time counterpart personnel as well as administrative personnel will be assigned to the Project. An assignment plan for full-time counterpart personnel is shown in the following chart;

<Assignment plan >

School	Sub-department	Total	2001	2002	2003	2004
IZMIR	Information Electronics	7	3	1	2	1
	Information Machinery	6	3	1	1	1
KONYA	Information Electronics	5	3	1	1	0

2. Allocation of Budget

(1) With reference to Item 6 (4) and 6 (5), Article III of the Record of Discussions, the Turkish side asked the Japanese side to consider providing support (because of existing regulations in force in the Republic of Turkey and financial difficulties).

(2) With reference to Item 7(3), Article III of the Record of Discussions, both sides will hold discussions to specify the content of necessary running expenses while implementing the Project.

III. OUTLINE OF CURRICULUM

An outline of the curriculum is shown in ANNEX I with reference to Master Plan of the Record of Discussions.

IV. PROJECT DESIGN MATRIX

The team explained that the Project Design Matrix (hereinafter referred to as the "PDM") is commonly used in Japanese technical cooperation in order to manage and implement projects efficiently and effectively. It will also be used as a reference for monitoring and evaluating the Project.

As a result of the discussions, both sides agreed to apply the PDM as shown in ANNEX II to the Project with the following understanding:

1. The PDM is a logically designed matrix which defines the initial understanding of the framework of technical cooperation for the Project and indicates the logical steps toward the achievement of the Project purpose.
2. The PDM is to be flexibly revised according to the progress and achievements of the Project, upon approval by the Joint Coordinating Committee.

V. TENTATIVE SCHEDULE OF IMPLEMENTATION

The schedule is subject to change within the scope of the Record of Discussions, when necessity arises, in the course of Project implementation.

The Tentative Schedule of Implementation is shown in ANNEX III.

VI. PLAN OF OPERATION

The Plan of Operation has been tentatively formulated according to the Record of Discussions. The Plan of Operation for the entire period of the Project is shown in ANNEX IV and the Annual Plan of Operation for the first year is shown in ANNEX V.

The Annual Plan of Operation is to be drafted by both the Turkish counterparts and the Japanese experts, and is to be submitted to the Joint Coordinating Committee. The activities are subject to change within the scope of the Record of Discussions, if necessity arises, in the course of Project implementation.

VII. ADMINISTRATION OF THE PROJECT

1. With reference to Article IV of the Record of Discussions, both the Team and the Turkish side agreed that under the overall responsibility of the Project Director, coordination of administration and implementation of the Project will be carried out through mutual consultation by both the Turkish side and the Japanese side.
2. The Organizational Chart of the Project is given in ANNEX VI.



- ANNEX I Curriculum of the Industrial Automation Technologies Department and its list of main machinery and equipment
- ANNEX II PDM
- ANNEX III Tentative Schedule of Implementation
- ANNEX IV The Plan of Operation for the entire period
- ANNEX V Annual Plan of Operation for the first year
- ANNEX VI The Organizational Chart of the Project

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CURRICULUM OF THE INDUSTRIAL AUTOMATION TECHNOLOGIES DEPARTMENT
AND ITS LIST OF MAIN MACHINERY & EQUIPMENT

	SUBJECTS	MAIN MACHINERY & EQUIPMENT
C O M M O N	Subject: "Basic Practice for Industrial works" Purpose: Study of basic knowledge of electricity, electronics, and digital circuit. Chapter: 1 Electric circuits / components 2 Electronics / semi-conductors 3 Digital circuits	volts meter, ampere meter, oscilloscope, sharing machine, bending machine, etching gadget
	Subject: "Mathematics for engineering I" Purpose: Study of mathematics knowledge for basic industrial process. Chapter: 1 Outline of the Automatic Control Technology 2 Industrial phenomena and its mathematical expression 3 Mathematical disposal 4 Application of the disposal 5 Practice	—
	Subject: "Basic Practice for Information Technology" Purpose: Study of basic concept of the information technology, organization of practice on how to use basic software applications. Chapter: 1 Operating system 2 Application software 3 Internet /Web. System / UNIX 4 E-mail 5 Home page building practice 6 Picture editing / Movies, Sound 7 Three dimension graphics practice 8 Practice of the CD-ROM contents	personal computer with network facility, application software (word processor etc.), digital camera

	SUBJECTS	MAIN MACHINERY & EQUIPMENT
C O M M O N	Subject: "Mechanical Works and Engineering I" Purpose: Study and practice of the basic mechanical engineering subject. Chapter : 1 Industrial material for manufacturing 2 Mechanical work, using the material 3 Introductory of basic mechanical design	lathe, drilling machine, milling machine
	Subject: "Technical Drawing" Purpose: Study and development of analytical skills for drawing data / files, as well as basic knowledge and technique of drawing through drawing practice, then study of fundamental knowledge of the CAD/CAM.	drawing instrument
	Subject: "Mathematics for engineering II" Purpose: Study on how to dispose engineering mathematical expression to computer processes. Chapter : 1 Mathematical computer-process	—
	Subject: "Mechanical Works and Engineering II" Purpose: Study of mechanical design technology through practice.	lathe, drilling machine, milling machine
	Subject: "Microcomputer Technology" Purpose: Study and practice of computer hardware configurations and assembly, as well as the basics of software and interface technology.	PIC training set, pocket computer, personal computer
	Chapter : 1 Configuration of a micro-processor 2 Hardware 3 Software 4 Input / Output interface 5 Programming	PIC: one kind of micro-processors

	SUBJECTS	MAIN MACHINERY & EQUIPMENT
	Subject: "Electricity and Electronic Engineering" Purpose: Study of engineering phenomena and circuitry of electricity / electronics, as well as study of mathematical disposal of engineering phenomena. Chapter : 1 Alternating current circuit 2 Magnetisms 3 Electric motor 4 Transistor	—
C	Subject: "CAD / CAM" Purpose: Practice of CAD / CAM. Chapter : 1 Basic mechanisms of the CAD 2 Operation of the CAD / CAM	personal computer, CAD/CAM software
O		
M	Subject: "Fundamentals of Computer Network" Purpose: Study of technology of the local area network, then study of the network for manufacturing.	personal computer, network equipment
M	Chapter : 1 Basics of the local area network 2 OSI model (OSI: Open System Interconnection) 3 Practice of the network 4 Outline of the UNIX 5 Internet Technology 6 Configuration of a network server	
O		
N	Subject: "Industrial Management" Purpose: Study of basic managerial knowledge concerning industrial farm operation. Chapter : 1 Planning and control of manufacturing products 2 Manufacturing process management and quality control 3 Security management for manufacturing accidents 4 Smooth operation of an industrial farm	—

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		SUBJECTS	MAIN MACHINERY & EQUIPMENT
S P E C I A L I T Y	I N F O R M A T I O N T E C H N O L O G Y (IM)	Subject: "Computer Control Technology" Purpose: Study of actual computer control technology on a manufacturing line and its interface technology, as well as related programming. Chapter : 1 Advanced concept of the interface 2 C-language programming 3 Control technology of a peripheral machine 4 Design technology of the computer control	personal computer, I/O interface I/O: Input and Output
		Subject: "Computer Network for the Factory Automation System" Purpose: Study of computer network system for / connecting manufacturing facilities on a farm and for / connecting farms. Chapter : 1 Application of the internet server 2 Factory automation technology through the computer network	personal computer
		Subject: "Automatic Production Technology" Purpose: Study of practical automation production technology on various manufacturing processes, then study of operation of a NC machine, a robot, and application of the PLC. Chapter : 1 NC programming 2 Industrial robot 3 Automation technology of manufacturing facility	NC machine, industrial robot
		Subject: "Factory Automation System Technology" Purpose: Study of connection technology of various kinds of manufacturing process line, using the PLC and the PC system. Chapter : 1 Design of the FA system 2 Operation of the system 3 Maintenance	Factory Automation system

		SUBJECTS	MAIN MACHINERY & EQUIPMENT
S P E C I A L I T Y	I N F O R M A T I O N A L T E C H N I C S (IE)	Subject: "Mechatronics" Purpose: Study of technology of sensors, actuators and system configuration using a sensor and actuator. Chapter : 1 Knowledge of various sensors and actuators 2 Programming and control technology 3 The built-in system	sensor, actuator
		Subject: "Feedback Control Technology" Purpose: Study of control technology of analogue data / information. Chapter : 1 Basics of the feed back control 2 Analogue proportional integrals / differentials 3 Digital proportional integrals / differentials	personal computer
		Subject: "Computer Programming" Purpose: Study of C-language programming as a basic control language. Chapter : 1 Basics of the grammar 2 The sub-routines and the pointer 3 Disposals of character data 4 Structure body 5 Built-in program of the C-language	personal computer
		Subject: "Industrial Products Design" Purpose: Design and creation of a control system, using all studied subjects.	personal computer, CNC milling machine for electronic circuit board CNC: Computerized Numerical Control

	SUBJECTS	MAIN MACHINERY & EQUIPMENT
S P E C I A L I T Y	Subject: "Network design for computer system on the automatic control" Purpose: Design and construction of the automatic control network, using the control technology and program language. IE Chapter : 1 Control technology through the network 2 Language of "JAVA" 3 Practice of the network design	personal computer, network equipment

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CHINA

PROJECT DESIGN MATRIX

Project Title: The Project on Establishment of Industrial Automation Technologies Departments in Anatolian Technical High Schools

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<p>Ultimate Goal</p> <p>To fill the demand for mid-level technicians and engineers in the industrial automation technology field in the Republic of Turkey.</p>	<p>1. Increase in the number of persons finding employment in the automation technology field</p>	<p>1. Statistical records</p>	
<p>Overall Goal</p> <p>To introduce a new educational system for industrial automation technology for other Anatolian Technical High Schools.</p>	<p>1. Number of industrial automation technologies departments established at Anatolian technical high schools 2. Number of project subjects taught at Anatolian technical high schools</p>	<p>1. Data from the Ministry of National Education 2. Data from the Ministry of National Education</p>	<p>1. Enterprises continue to require technicians trained in automation technology</p>
<p>Project Purpose</p> <p>To establish a new educational system as an extension model in the Izmir and Konya Anatolian Technical High Schools in order to train mid-level technicians that will meet the requirements of industries utilizing automation technology.</p>	<p>1. Ratio of students finding employment in industries using automation technology against the overall number of students finding employment 2. Degree of satisfaction enterprises have for the capabilities of graduates 3. Number of applicants to Izmir Mazhar Zorlu and Konya Adil Karaagac ATİİSs 4. Proportion of Anatolian technical high school teachers that understand the new educational system 5. Entrance examination scores of successful applicants to both schools</p>	<p>1. Records of where students are employed after graduation 2. Questionnaires distributed to enterprises 3. Data from the Ministry of National Education 4. Records of project activities, data from the Ministry of National Education 5. Data from the Ministry of National Education</p>	<p>1. The needs of enterprises for technicians trained in automation technology do not change significantly. 2. The project continues to receive the support of the Ministry of National Education. 3. Teachers that have received training do not enter private employment. 4. Continuous funding of the project is secured.</p>

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PROJECT DESIGN MATRIX

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<p>Outputs</p> <p>1. Development of an innovative curriculum.</p> <p>2. Development of suitable learning materials.</p> <p>3. Development of suitable teaching materials.</p> <p>4. Establishment of a training system for teachers (including teaching methods) and improvement of teachers' capabilities.</p> <p>5. Introduction of suitable equipment to meet the requirements of industry.</p> <p>6. Proper operation and maintenance of the equipment mentioned above.</p> <p>7. Outputs 1 - 6. above are disseminated to the public, other schools and industries via the Internet.</p> <p>8. Establishment of a new system for industrial automation technologies departments in Anatolian technical high schools that meets the needs of industry, and creation of an extension system.</p>	<p>1-1. Curriculum and syllabus are developed by (month) 2001</p> <p>1-2. The Board of Education approves the curriculum by (month) 2001</p> <p>1-3. Degree of satisfaction related industries have for the curriculum</p> <p>2. (Learning materials/textbooks) are prepared (number) months before the start of lessons each school year</p> <p>3. (Instruction manuals for practice manual/instruction outline/demonstration model) are prepared (number) months before the start of lessons each school year</p> <p>4. Level to which teachers have mastered (lesson content/instruction methods/course management methods)</p> <p>5-1. Degree of satisfaction of enterprises for level of equipment supplied</p> <p>5-2. Equipment is installed (number) months before technical transfer</p> <p>6-1. Level to which C/Ps have mastered operation of equipment</p> <p>6-2. Rate of operation of equipment</p> <p>6-3. Rate of inefficiency due to lack of spare parts and expendables</p> <p>7-1. Degree to which conversion has been completed (curriculum, syllabus, learning materials, teaching materials, training system)</p> <p>7-2. Percentage of electronic media deployed to the public, other schools and industries</p> <p>8-1. Ministry of National Education announces the introduction of the new educational system</p> <p>8-2. Surveys of the needs of enterprises are conducted more than once per year</p> <p>8-3. Degree to which extension seminars for the new educational system (directed at other schools) are held</p> <p>8-4. Degree to which introductory seminars for the new educational system (directed at enterprises) are held</p> <p>8-5. Number of teachers who work for other ATHSS receiving instruction in courses related to industrial automation technologies</p> <p>8-6. Degree to which schools to implement the new educational system have been selected</p>	<p>1-1. Records of project activities</p> <p>1-2. Data from the Ministry of National Education</p> <p>1-3. Questionnaires distributed to related enterprises</p> <p>2. Records of project activities</p> <p>3. Records of project activities</p> <p>4-1. Implementation of evaluation committee</p> <p>4-2. Implementation of simultaneous testing of teachers</p> <p>5-1. Interviews of related enterprises</p> <p>5-2. Equipment maintenance records</p> <p>6-1. Records of project activities</p> <p>6-2. Records of equipment rate of operation survey</p> <p>6-3. Records of spare parts and expendables stock survey</p> <p>6-4. Interviews concerning route for obtaining spare parts and expendables or substitutes</p> <p>7-1. Records of project activities</p> <p>7-2. Records of survey of amount of information made available on the Internet</p> <p>8-1. Data from the Ministry of National Education</p> <p>8-2 to 8-5. Records of project activities</p> <p>8-6. Data from the Ministry of National Education, records of project activities</p>	<p>1. The needs of enterprises for technicians trained in automation technology do not change significantly from those assessed by the needs survey.</p>

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PROJECT DESIGN MATRIX

Activities	Inputs	Important Assumptions
<p>1-1. Formulation of curriculum 1-2. Drawing up of a syllabus based on the curriculum 2-1. Production of learning materials 2-2. Production of textbooks 3-1. Production of teachers' manuals 3-2. Drawing up of a teaching guidance for training 3-3. Drawing up of a demonstration model 3-4. Implementation of a model lesson by experts 4-1. Development of teachers' training materials 4-2. Technology transfer related to training methods 4-3. Implementation of teachers' training using learning and teaching materials produced under 2 and 3 above 5-1. Drawing up of a list of training equipment 5-2. Procurement of equipment 6-1. Technology transfer related to the correct use of equipment 6-2. Implementation of training on the maintenance of equipment 6-3. Formulation of a plan for acquiring necessary spare parts (e.g. confirming the route for obtaining spare parts and expendables or substitutes) 7-1. Establishment of a database of information resulting from items 1 to 6 7-2. Extension of the information to the public via the Internet and establishment of a management system 8-1. Understanding of the automation technology needs of industry 8-2. Work to gain certification from the Turkish Ministry of National Education for the new educational system 8-3. Implementation of seminars for other schools aimed at extending the new educational system 8-4. Implementation of seminars for enterprises aimed at introducing the new educational system 8-5. Implementation of teachers' training courses for instruction of specific subjects 8-6. Support in selection of schools to implement the new educational system 8-7. Support for the career guidance/job placement system 8-8. Strengthening of the network with industry</p>	<p>Turkish Side</p> <ol style="list-style-type: none"> 1. Assignment of personnel -Counterparts (C/Ps) IZMIR Information Electronics: 7 Information Machinery: 6 KONYA Information Electronics: 5 -Administrative personnel 2. Buildings and facilities 3. Furniture and consumable materials 4. Allocation of budget <p>Japanese side</p> <ol style="list-style-type: none"> 1. Long-term experts Chief advisor, Information Electronics: 2 (Industrial Product Design Sub-division, Network Design for Automatic Control Sub-division), Information Machinery: 2 (Automatic Production Technology Sub-division, Factory Automation System Technology Sub-division), Coordinator -Short-term experts 2. Provision of equipment 3. Training of Turkish C/Ps in Japan 	<p>1. The occupational training system in Turkey does not change significantly. 2. Accessibility to the Internet improves. (Establishment of infrastructure for electronic communication progresses.)</p> <hr/> <p>Preconditions</p> <ol style="list-style-type: none"> 1. Counterparts are appropriately assigned 2. Financial resources are appropriately secured.

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TENTATIVE SCHEDULE OF IMPLEMENTATION

PROJECT TITLE : THE PROJECT ON ESTABLISHMENT OF INDUSTRIAL AUTOMATION TECHNOLOGIES DEPARTMENTS IN ANATOLIAN TECHNICAL HIGH SCHOOLS

PHASE	IMPLEMENTATION					
	2001	2002	2003	2004	2005	2006
I. PROJECT DURATION	[Solid bar spanning 2001-2006]					
II. INPUTS BY THE TURKISH SIDE	[Solid bar spanning 2001-2006]					
1. ASSIGNMENT OF COUNTERPART PERSONNEL	[Solid bar spanning 2001-2006]					
2. ASSIGNMENT OF ADMINISTRATIVE PERSONNEL	[Solid bar spanning 2001-2006]					
3. BUILDINGS & FACILITIES	[Solid bar spanning 2001-2004]					
4. FURNITURE & CONSUMABLE MATERIALS	[Solid bar spanning 2001-2006]					
5. ALLOCATION OF BUDGET	[Solid bar spanning 2001-2006]					
III. INPUTS BY THE JAPANESE SIDE	[Solid bar spanning 2001-2006]					
1. LONG-TERM EXPERTS	[Solid bar spanning 2001-2006]					
2. SHORT-TERM EXPERTS	[Solid bar 2001]	[Solid bar 2002]	[Solid bar 2003]	[Solid bar 2004]	[Solid bar 2005]	
3. PROVISION OF EQUIPMENT	[Solid bar spanning 2001-2004]					
4. TRAINING OF TURKISH COUNTERPART PERSONNEL IN JAPAN	[Solid bar 2001]	[Solid bar 2002]	[Solid bar 2003]	[Solid bar 2004]		
5. STUDY TEAMS			[Solid bar 2003]		[Solid bar 2005]	
IV. JOINT COORDINATING COMMITTEE	[Solid bar 2001]	[Solid bar 2002]	[Solid bar 2003]	[Solid bar 2004]	[Solid bar 2005]	
V. TECHNOLOGY TRANSFER	<pre> graph LR G1[1 Grade] --> G2[2 Grade] G2 --> G3[3 Grade] G3 --> G4[4 Grade] G1 -.-> G2 G2 -.-> G3 G3 -.-> G4 </pre>					

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PROJECT TITLE: THE PROJECT ON ESTABLISHMENT OF INDUSTRIAL AUTOMATION TECHNOLOGIES DEPARTMENTS IN ANATOLIAN TECHNICAL HIGH SCHOOLS

ACTIVITIES	1st Year				2nd Year				3rd Year				4th Year				5th Year				
	2001				2002				2003				2004				2005				2006
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I
TERM OF COOPERATION																					
1. Development of an innovative curriculum.																					
1-1. Formulation of curriculum	—																				
1-2. Drawing up of a syllabus based on the curriculum	—																				
2. Development of suitable materials.																					
2-1. Production of learning materials					—												—				
2-2. Production of textbooks					—												—				
3. Development of suitable teaching materials.																					
3-1. Production of teachers' manuals					—												—				
3-2. Drawing up of a teaching guidance for training					—												—				
3-3. Drawing up of a demonstration model					—												—				
3-4. Implementation of a model lesson by experts					—												—				
4. Establishment of a training system for teachers (including teaching methods) and improvement of teachers' capabilities:																					
4-1. Development of teachers' training materials					—												—				
4-2. Technology transfer related to training methods					—												—				
4-3. Implementation of teachers' training using learning and teaching materials produced under 2 and 3 above.					—												—				
5. Introduction of suitable equipment to meet the requirements of industry.																					
5-1. Drawing up of a list of training equipment	—																				
5-2. Procurement of equipment	—																				

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ACTIVITIES	1st Year				2nd Year				3rd Year				4th Year				5th Year				
	2001				2002				2003				2004				2005				2006
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I
6. Proper operation and maintenance of the equipment mentioned above.																					
6-1. Technology transfer related to the correct use of equipment																					
6-2. Implementation of training on the maintenance of equipment																					
6-3. Formulation of a plan for acquiring necessary spare parts (e.g. confirming the route for obtaining spare parts and expendables or substitutes)																					
7. Outputs 1.- 6. above are disseminated to the public, other schools and industries via the Internet.																					
7-1. Establishment of a database of information resulting from items 1 to 6																					
7-2. Extension of the information to the public via the Internet and establishment of a management system																					

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ACTIVITIES	1st Year				2nd Year				3rd Year				4th Year				5th Year				
	2001				2002				2003				2004				2005				2006
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I
8. Establishment of a new system for industrial automation technologies departments in Anatolian technical high schools that meets the needs of industry, and creation of an extension system.																					
8-1. Understanding of the automation technology needs of industry																					
8-2. Work to gain certification from the Turkish Ministry of National Education for the new educational system																					
8-3. Implementation of seminars for other schools aimed at extending the new educational system																					
8-4. Implementation of seminars for enterprises aimed at introducing the new educational system																					
8-5. Implementation of teachers' training courses for instruction of specific subjects																					
8-6. Support in selection of schools to implement the new educational system																					
8-7. Support for the career guidance/job placement system																					
8-8. Strengthening of the network with industry																					

I: April-June
 II: July-September
 III: October-December
 IV: January-March

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PROJECT TITLE: THE PROJECT ON ESTABLISHMENT OF INDUSTRIAL AUTOMATION TECHNOLOGIES DEPARTMENTS IN ANATOLIAN TECHNICAL HIGH SCHOOLS

ACTIVITIES	2001									2002			
	4	5	6	7	8	9	10	11	12	1	2	3	4
TERM OF COOPERATION	_____												
1. Development of an innovative curriculum.													
1-1. Formulation of curriculum	_____												
1-2. Drawing up of a syllabus based on the curriculum				_____	_____								
2. Development of suitable materials.													
2-1. Production of learning materials													
2-2. Production of textbooks													
3. Development of suitable teaching materials.													
3-1. Production of teachers' manuals													
3-2. Drawing up of a teaching guidance for training													
3-3. Drawing up of a demonstration model													
3-4. Implementation of a model lesson by experts													
4. Establishment of a training system for teachers (including teaching methods) and improvement of teachers' capabilities.													
4-1. Development of teachers' training materials													
4-2. Technology transfer related to training methods													
4-3. Implementation of teachers' training using learning and teaching materials produced under 2 and 3 above.													

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ACTIVITIES	2001									2002			
	4	5	6	7	8	9	10	11	12	1	2	3	4
5. Introduction of suitable equipment to meet the requirements of industry. 5-1. Drawing up of a list of training equipment 5-2. Procurement of equipment													
6. Proper operation and maintenance of the equipment mentioned above. 6-1. Technology transfer related to the correct use of equipment 6-2. Implementation of training on the maintenance of equipment 6-3. Formulation of a plan for acquiring necessary spare parts (e.g. confirming the route for obtaining spare parts and expendables or substitutes)													
7. Outputs 1 - 6. above are disseminated to the public, other schools and industries via the Internet. 7-1. Establishment of a database of information resulting from items 1 to 6 7-2. Extension of the information to the public via the Internet and establishment of a management system													

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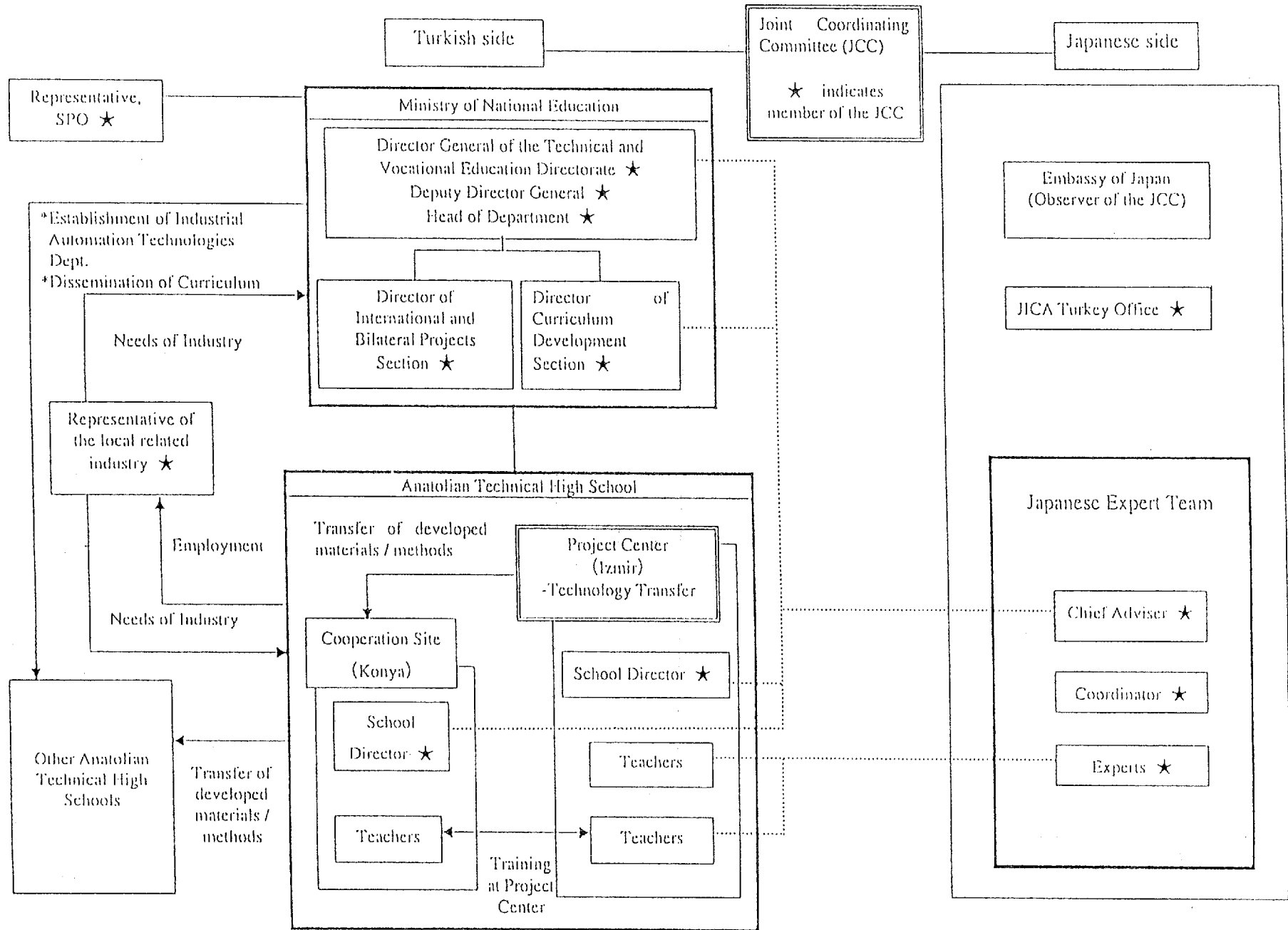
ACTIVITIES	2001									2002			
	4	5	6	7	8	9	10	11	12	1	2	3	4
8. Establishment of a new system for industrial automation technologies departments in Anatolian technical high schools that meets the needs of industry, and creation of an extension system.													
8-1. Understanding of the automation technology needs of industry													
8-2. Work to gain certification from the Turkish Ministry of National Education for the new educational system													
8-3. Implementation of seminars for other schools aimed at extending the new educational system													
8-4. Implementation of seminars for enterprises aimed at introducing the new educational system													
8-5. Implementation of teachers' training courses for instruction of specific subjects													
8-6. Support in selection of schools to implement the new educational system													
8-7. Support for the career guidance/job placement system													
8-8. Strengthening of the network with industry													

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The Organization Chart of the Project

ANNEX VI



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