Charter of the
International Advanced Robotics Programme
(IARP)

Preamble

The Advanced Robotics Project was established by the Heads of State of G7 in 1982, recognizing the strategic role of robotics technologies in furthering economic and social development. A final report on this project was presented in the Tokyo Economic Summit in 1986. The International Advanced Robotics Programme was also established in 1986 to pursue the intent of the 1982 Economic Summit and, although it no longer reports to the Heads of State of the G7, it remains a government based activity, open to all countries. The objective of IARP is:

"To foster international cooperation toward the development of advanced robotic systems capable of eliminating or minimizing human exposure to difficult activities in harsh, demanding, dangerous conditions or environments".

Since its establishment, IARP has fostered and catalysed international cooperation in “hot research topics”, as well as in application domains that encompass or use robotics and intelligent machines. It has also paved the way for the introduction of new promising research directions.

In 1996, IARP generated a report assessing the status and the future impact of Robotics Research Technologies in practical applications. Industrial Robots were a typical example, integrating many technologies. At the end of 1995, the world total of industrial robots, primarily in manufacturing industries, was approximately 700,000 with a yearly growth rate averaging 30%.

- Ever since, a new category of robots has emerged, namely service and intervention robots. Their number has outpaced industrial robots and they became an important market segment, with applications including:
- Materials handling and transportation, construction, sewer inspection and repair, etc.
- Field-based applications such as mining, forestry, agriculture, underwater and space.
- Public-oriented areas ranging from domestic and professional cleaning, handling dangerous substances, hotel and hospital catering, assistance to the disabled and the aging.
- Network based remote operations.
- Healthcare, surgical, and medical intervention.

Currently, several thousand service robots are in worldwide operation. These include scientific and commercial products operating in both public and private spaces.

1. Mission, Role and Strategy

Research and development efforts have brought robotics to efficient market driven products and further developments in enabling technologies will only increase the number of robotics products and their applications. These results have been made possible and fostered by Governments, Public Institutions, Industrial Companies, and Basic Research Laboratories and Academic Institutions throughout the world. Synergy among these entities has been instrumental in moving the field forward. Furthermore, international cooperation has been a key factor in several large and ambitious robotics programmes (e.g. The European Commission's Framework Programmes, EUREKA, NSF / DARPA, etc.). Enabling technologies, in robotics, together with dramatic developments in information technology, have fostered new perspectives in Manufacturing Robots and Service and Intervention Robots. It is possible to envisage the development of sophisticated machines endowed with operational and decisional autonomy, i.e., Intelligent Machines that, together with appropriate Human Factors enhancements, will allow true Human-robot coexistence in applications. This offers the opportunity to develop novel robotic machinery for applications which will result in better and more efficient working conditions, and which will address social needs, such as health care, assistance to the impaired and the aging, and environmental remediation. Products developed in response to user requirements will not only satisfy societal needs but will also spur economic growth and create new jobs.

A broad host of domains covered by Service and Intervention Robots challenges both robotics researchers as well as social, economic, and political decision makers.

Based on these predictions, IARP reaffirms its original role and strategy: to foster international cooperation in robotics research; to promote the field of Advanced Robotics, looking beyond today's industrial products; and to focus attention on novel application domains in response to socio-economic needs.

IARP is a lightly structured body pursuing the role of assessment and information source to participating national officials. Accordingly, IARP will assume a pro-active role by:

- promoting research themes and domains of special interest for international cooperation through national official channels and institutions,
- identifying new countries that are important international or regional actors, with the capacity to benefit from the IARP and to be beneficial for the other members.

Within this framework, IARP will continue to promote new endeavours that develop enabling technologies for novel applications leading to new products and jobs. This promotion will be undertaken within the four main activities of IARP, namely:

- To establish an annual report on national activities related to the field covered (each country preparing one status report).
- To organize special workshops by interested countries to assess the status of, and to foster international cooperation in, either scientific topics or applied domains. Those workshops convene by invitation only.
- To organize study missions and working groups.
- To facilitate cooperative activities and researchers' exchanges.

2. Membership and Organization

2.1 Membership

Membership of IARP is open to all countries that can demonstrate they can benefit from belonging to IARP, can bring benefit to existing members and can show appropriate governmental support for the initiative. Once granted full membership a country will retain this status except by the provisions of termination laid out in paragraph 3.2.

New members requesting membership will normally request observer status for an initial period. If successful, this may be followed by a request for full membership, normally after a period of one to two years. Exceptionally, and only if authorised by the Executive Committee, a new country may request direct accession to full membership. All requests for membership will be considered and accepted or rejected by the existing members within the Joint Coordinating Forum.

A status of observer can also be granted to appropriate institutions (see 3.1.1.3)

2.2 Organization

The current structure of IARP comprises:

- the Joint Coordinating Forum (JCF – see 2.3 below),
- the JCF Chair (see 2.6 below),
- the Executive Committee (see 2.8 below),
- the Secretariat, attached to the Executive Secretary and providing logistic support and the following services:

-- maintenance of information and IARP status,

-- dissemination of information,

-- logistic support to IARP (e.g. the Executive Committee).

The current membership of IARP is shown on the IARP website at http://iarp.isir.upmc.fr/index.php?z=page_editor|1

2.3 JCF

The Joint Coordinating Forum (JCF), the governing body of IARP, comprises one representative from each member and observer countries and each observer institution. The JCF is a Steering Committee for all major issues encountered in pursuit of the programme, such as implementing plans and procedures. Each full member has equal status in determining the direction and actions of IARP. Where necessary, resolutions will be put to a vote with each full member representative having one vote. In the event of a tied vote, the JCF Chair shall have the casting vote.

JCF meetings are held in each member country rotationally.

2.4 IARP President

Elected by the JCF for three years, the President is a member of the JCF, represents IARP

officially, gives advice to the Executive Secretary and provides continuity to the endeavours of IARP.

2.5 Executive Secretary

The Executive Secretary, appointed for a five-year term by the JCF, is a member of the Executive Committee, works closely with it, the IARP President, and the JCF Chair, and is charged to carry out specific JCF decisions and to prepare IARP future actions. The Executive Secretary will provide the facilities of the IARP Secretariat and ensure its effective operation.

To avoid loss of continuity, the elections of the President and General Secretary shall not occur within one year of each other.

2.6 The JCF Chair

The JCF Chair is elected by the JCF to serve a nominal one year term finishing immediately before the next JCF. During his or her term of office, the JCF Chair is a member of the IARP Executive Committee (See 2.8) which is responsible for the management of current IARP activities. In particular the JCF Chair is responsible for organising and running the JCF, the timely publication of JCF minutes and for ensuring that IARP workshop organisers understand their roles and responsibilities.

Identification of the future JCF Chair (JCF Chair Elect) will normally take place one year in advance, during the JCF, or as soon after this as possible.

2.7 IARP Vice-President

Elected by the JCF for three years, the Vice-President shall carry out specific tasks as delegated by the JCF. The Vice-President shall be responsible for producing the annual IARP summary status report (see 3.3.4). The Vice-President shall also deputise for the President for specific meetings or activities at the request of the President or if the post is temporarily unfilled. The Vice-President shall also deputise for the Executive Secretary for specific meetings or activities at the request of the Executive Secretary or if the post is temporarily unfilled.

2.8 Executive Committee

The Executive Committee (ExCom) comprises five members:

- The IARP President
- The IARP Executive Secretary
- The current JCF Chair
- The JCF Chair Elect
- The IARP Vice-President

ExCom meetings will be notified to all JCF members, where time permits, and any JCF member may attend such meetings.

2.9 Operating Rules

IARP stresses individual country and institution activity. This leads to very simple operating rules regarding responsibilities and actions:

- The JCF decisions related to internal working rules (bylaws) as presented in this charter apply to all members and observers.
- Only the JCF can grant the IARP label to actions and activities initiated or carried out in compliance with the IARP bylaws.
- All expenses related to IARP activities are borne by participating entities.
- Every country covers the expenses entailed by the activities it leads. For instance, expenses related to the Secretariat are borne by the hosting country, and workshop logistical expenses are covered by the organizing institution.
- The country initiating a study mission bears the corresponding cost.

3. IARP Guidelines

3.1 Guidelines for Joining IARP

All membership applications are decided by a vote at the meeting of the JCF and carried by a simple majority of the members present.

3.1.1 Observer Status

3.1.1.1 Category definition

A status of observer can be granted to new countries providing for the eventual possibility for full membership. The status of observer can also be granted to international institutions engaged in cooperative R&D. An observer has no formal voting rights at JCF meetings, but receives minutes of the meetings along with copies of all status reports. An observer is free to sponsor or cosponsor workshops and participate in study missions. Observer status is decided by a vote at a meeting of the JCF.

3.1.1.2 Observer countries

A country seeking observer membership must satisfy the following criteria:

1. An official request for observer status must be received through appropriate government channels
2. The country must also demonstrate strong interest, suitable scientific credentials and some capacity for participation.
3. A contact person must be appointed through government channels and must be able to act on their behalf.

3.1.1.3 International institutions

An international institution seeking observer status must satisfy the following criteria:

1. The institution must demonstrate strong interest, suitable cooperative R&D credentials and a capacity for participation.
2. A contact person must be appointed through official channels and must be able to fulfil observer obligations.

3.1.2 Member Status

Full membership can only be held by countries. A country seeking member status must satisfy the following criteria:

1. The country must have attained observer status or have been given special dispensation by the Executive Committee to apply directly for Full Member status.
2. The country seeking membership should have demonstrated suitable scientific credentials.
3. The country should provide financial means to support attendance of the contact person at JCF meetings, to sponsor and cosponsor IARP workshops, to host meetings of the JCF, and to perform other activities associated with membership.

3.1.3. Contact Person

The contact person is either the member or observer country representative or organization representative. The contact person must fulfil the following functions:

1. Attend and participate regularly in JCF meetings.
2. Provide an annual status report about IARP-related activities.
3. Disseminate information circulated at JCF meetings about workshops and other relevant IARP activities.
4. Encourage the "best" national people, and international experts, to participate in workshops (i.e., submit papers, review papers, etc.).
5. Provide assistance for organizing study missions.
6. Encourage cooperative studies and especially the exchange of researchers (i.e., postdoctoral fellows, etc.).
7. Designate an alternate attendee, if the contact person is unable to attend a JCF meeting.

3.2 Guidelines for Terminating Membership

1. If the contact person is absent at two consecutive meetings of the JCF without formal explanations for the absence, and the country fails to provide regular information about its ongoing research in Advanced Robotics, a letter warning of termination of membership is mailed to the member country, addressed to the contact person and other relevant parties in governmental and scientific institutions.
2. If the country fails to respond to the letter of warning with a satisfactory restatement of commitment to IARP, termination of membership is then put to the vote at the next JCF meeting.

3.3 Guidelines for IARP labelled activities

3.3.1 Workshops

An IARP workshop may be proposed and sponsored by at least two members or observers. The proposal is submitted and discussed at a JCF meeting or in the case of urgency, to the Executive Committee. Other interested parties may choose to cosponsor the workshop pending final approval from their national agencies and managerial boards.

These workshops, with limited attendance, by invitation only, can be domain oriented, or directed to a specific scientific, engineering, or technical subject. Registration will be free to attendees and no other fee or consideration will be mandatory. Their aim is to assess particular problems, foster institutional actions and international cooperation, and help codify knowledge in important technical areas of Advanced Robotics.

Workshops may also be jointly organised in cooperation with other organisations and institutions. In such cases it is desirable that normal IARP workshop rules apply, but it is recognised that this will not always be practicable.

One or more of the workshop cosponsors act(s) as organizer supporting the host institution(s). The venue is usually, but not necessarily, in one of the member countries. The workshop organizers are obligated to carry out all local arrangements and to assume the responsibility for the associated costs including, in particular, the publishing of the proceedings in printed and / or electronic form. Cosponsoring countries assist in defining the scope of the workshop, review submitted papers and help with the final paper selection. The proceedings and workshop final technical reports are distributed free of charge to all JCF members and made available, optionally at a nominal fee, for broader dissemination. In the case of workshops organised solely by IARP the proceedings and final technical reports will be published at the IARP web site or some other site referenced by the IARP web site.

3.3.2 Working Groups

Working groups are one of the prime mechanisms for achieving concerted action on topics central to IARP objectives. A working group comprises interested IARP members and associated delegates. Working groups can be established on subjects of special interest for IARP, by decision of the JCF. A member of the JCF is appointed as working group chair and assumes responsibility for the working group activities. The working group chair reports to the ExCom and to the JCF. The working group chair can co-opt any individual to the working group who is judged able to add value.

3.3.3 Study Missions

A study mission, defined as a group of qualified individuals from one or more affiliate entities visiting one or more other entities, can be organized by any IARP member or observer. Full member countries' representatives have the obligation to facilitate study missions related to the research programmes in their country. All expenses related to the study mission are borne by the requesting parties. Study mission reports must be formally presented to the next JCF.

3.3.4 IARP Status Reports

The IARP status reports are an important method of dissemination of current developments and status relating to advanced robotics within each of the member countries. It is the responsibility of each contact person (both full members and observers) to ensure that the status report for their country or institution is produced in time for distribution and discussion at the JCF. Electronic versions of the Country Status reports will be made available by the contact person and will be published at the IARP web site.

A summary report of all IARP country status report will be produced shortly after the JCF. This summary report will provide highlights of activity within each country and will also be published at the IARP web site.