

T-Engine Forum Admission guide

Why not join our open forum activities to
realize ubiquitous computing environment?



www.t-engine.org

Who is T-Engine Forum?

T-Engine Forum is an NPO with the activity of international scope to promote the standards to improve the efficiency of real-time embedded systems development and to develop the infrastructure for context-awareness to implement ubiquitous computing environment. (The original ideas behind the standards were proposed by Dr. Ken Sakamura, Chair of T-Engine Forum, and Professor at the University of Tokyo.)

T-Engine Forum conducts the following:

- Designs the specification of T-Kernel, provides open source code, and disseminates middleware and development environment.
- Designs and maintains ITRON specification.
- Designs the specification of ucode, which is the universal number to identify objects and places, as well as of Ubiquitous ID architecture.
- Operates Ubiquitous ID Center, which is in charge of issuing and managing ucode.
- Conducts standardization activities toward achieving ubiquitous computing environment, and works with governmental and international organizations.

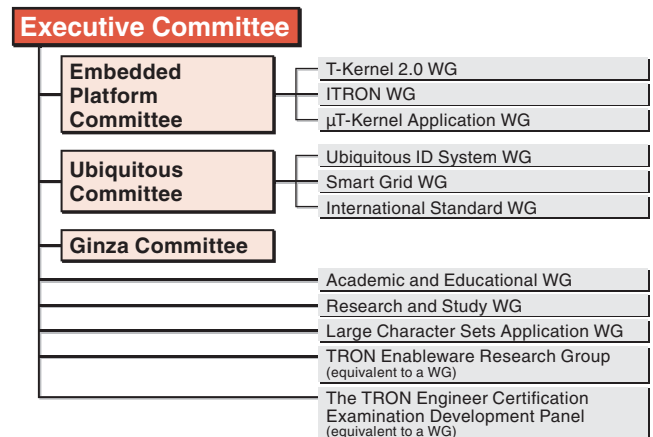
Membership Advantages

Members can

- participate in WGs, propose and design various specifications.
- obtain software and related documents prior to the release to the public.
 - T-Kernel Advance Release Version, μ T-Kernel TEST Suite, Guideline for Low Power Consumption Implementation, etc.
 - pre-release information on updates of software that is released to the public including T-Kernel.
- participate in seminars that are held by T-Engine Forum about 20 times a year for free.
 - seminars related to embedded and ubiquitous technology with practical training.
 - Executive Committee/A-members (up to 5 persons), and B-/e-members (up to 3 persons) can attend them free.
 - Membership discount for the registration of the TRON Engineer Certification Examination.
- communicate with other members and use service to introduce each other's products.
- introduce their own products through the T-Engine Forum website and e-mail magazines.
- participate in committees and general meetings.
- obtain "TRONWARE," a magazine that provides the latest information on TRON Project and ubiquitous computing, for free (6 issues/year).
- support joint overseas promotion activities.

Various Meetings

- **Executive Committee**
[Only Executive Committee members can attend]
- Decision-making body of T-Engine Forum consisting of Executive Committee members.
- **Committee**
[In principle, A- and Executive Committee members can attend]
- Embedded Platform Committee, Ubiquitous Committee and Ginza Committee are held. This is where the WG activities are reported.
- **Working Group**
[In principle, A- and Executive Committee members can attend]
- Studying particular topics.



Embedded Platform Committee

- Discussions on T-Kernel and ITRON related specifications

T-Kernel 2.0 WG

- Designs the specification of new T-Kernel 2.0, Standard Extension, etc.

ITRON WG

- Maintains and revises ITRON specification.

μ T-Kernel Application WG

- Proposes the extended specification of μ T-Kernel.
- Studies application areas including low power consumption, quality (high reliability, high quality), and security.

Ubiquitous Committee

- Discussions on uID related specifications, tag certification, ucode allocation, etc.

Ubiquitous ID System WG

- Review and usage expansion of systems such as ucode Entry System, Location Infrastructure System and Equipment Management System

Smart Grid WG

- Studies Smart Grid API.
- Makes proposals for various feasibility study experiments.

International Standard WG

- WG regarding international standardization activities at ITU-T, ISO, IEC, etc.

Ginza Committee

- Special Committee for conducting private sector experiences in Tokyo Ubiquitous Technology Project in Ginza

Academic and Educational WG

- Conducts seminars (related to embedded and ubiquitous computing technology).
- Develops necessary course materials.

Large Character Sets Application WG

- Discusses TRON large character sets environment.

Research and Study WG

- WG to examine the usage status of TRON specification OS and T-Kernel using questionnaires and other means

TRON Enableware Research Group (equivalent to a WG)

- Research group that studies specific ways to help physically-challenged people using embedded and ubiquitous computing technologies

■ Activities

[General Meeting]

- The general meeting is held four times a year to report the forum activities to members, introduce the products of members, and promote exchanges of information among members. Members can attend a keynote speech by Ken Sakamura, Chair of T-Engine Forum.



[General meetings for A- and B-members and for A- and e-members are separately held, which those having respective membership can attend.]

- Members can exhibit their own products.

[Seminars]

- Up to a specified number of persons from each member can attend seminars related to T-Kernel, ITRON specification OS, various development environments and Ubiquitous ID technology for free.



[Eligible members can attend our seminars.]

[Standardization Activities]

- T-Engine Forum designs specifications related to embedded devices including T-Kernel, its device drivers or Ubiquitous ID architecture in WGs, etc.
- The forum conducts activities to promote the standard specification, which include making proposals to international standardization organizations such as ITU-T.
- The forum does not just design specifications, but we establish the IPR (Intellectual Property Right) policy so that IPR issues for released specifications will not easily happen.

[Product Certification]

- Activities to certify members' products such as ITRON product certification and ucode tag certification are conducted.

[Providing Information]

- T-Engine Forum disseminates information on T-Engine, T-Kernel, ITRON specification OS, various development environments and Ubiquitous ID technology through our website and e-mail magazines.

- The following information is provided at the members-only webpage. (Note that available information is different depending on the membership type. Separate contracts or applications may be required for some types of information.)

- Specifications and the latest and updated information of T-Kernel, μ T-Kernel, T-Kernel Standard Extension, MP T-Kernel, various adaptation patches, T-Kernel TEST suite, tools, etc. prior to the public release.
- Specifications and the latest and updated information of software and tools such as ucode Resolution Library and ucode Entry System related to Ubiquitous ID technology prior to the public release.
- Activity reports of general meetings, committees and WGs.
- Seminar texts, sample codes, etc.

[Cooperation for Various Feasibility Study Experiments]

- T-Engine Forum cooperated with many feasibility study experiments including "Tokyo Ubiquitous Technology Project" in their preparation, coordination and improvement of the experimental environments.



[Exhibit]

- The forum promotes T-Engine, T-Kernel, ITRON specification OS, various development environments and Ubiquitous ID technology hosting TRONSHOW on its own and making presentations at various exhibits.



[Information for the Media]

- The forum disseminates information on T-Kernel, ITRON specification OS, various development environments and Ubiquitous ID technology to the press and cooperates with the media for news gathering activities.

■ The TRON Engineer Certification Examination

- Many problems occur due to the lack of criteria to measure technical skills objectively when development work is outsourced. Such outsourcing happens often due to the scarcity of embedded engineers. To resolve them, T-Engine Forum conducts the "TRON Engineer Certification Examination." The purposes of the examination are to objectively measure the technical skills of engineers who use embedded real-time OS such as T-Kernel and ITRON specification OS, etc., in order to improve the status of engineers with high technological skills and to stimulate the entire embedded systems industry.

- The examination is for embedded real-time systems development engineers in companies that utilize or consider utilizing TRON specification OS such as T-Kernel and ITRON specification OS, etc.
- The examination time is 90 minutes.
- The perfect score is 100 points, and a pass/fail judgment is not made.
- T-Engine Forum members can take the examination at a discount.

■ Ubiquitous ID Center

- T-Engine Forum operates Ubiquitous ID Center that issues and manages ucodes.
- Developing and certifying the following core technology for ucodes:
 - Data carrier devices to store ucodes (RFIDs, smart cards, active chips, etc.)
 - Devices that communicate with data carrier devices (Ubiquitous Communicators)
 - Communication infrastructure that can retrieve information associated with ucodes
 - Secure wide-area distributed systems for ucodes and information associated with the ucodes

- Supporting overseas branches of Ubiquitous ID Center, which issue and manage ucodes abroad
- Collecting and providing information toward the realization of ubiquitous computing environments
- Conducting standardization activities and coordinating with government agencies or international organizations toward the realization of ubiquitous computing environments

■ T-Engine Forum Membership Types

① Executive Committee members

Members who are deeply involved in T-Engine Forum operations including decision-making for policies and strategies.

Executive Committee members can be deeply involved in the operation of this forum, including participation in executive committees where decision-making for policies and strategies is conducted.

Executive Committee members can

- participate in executive committees, committees, working groups, general meetings and seminars.
- enjoy all the privileges that A-, B- and e-members have and can browse all the "members-only websites."

② A-members

Members who design and develop specifications of T-Kernel and ITRON itself, or design and develop specifications of Ubiquitous ID technology. They can be deeply involved in these specifications.

A-member type should meet the needs of those that develop products using T-Kernel and ITRON specification OS, and would like to be involved in the specification creation and development of these platforms.

A-member type should also meet the needs of those that develop ubiquitous computing related technologies and products, and would like to be involved in the specification creation and development of Ubiquitous ID technology, etc. and provider services.

A-members can

- access information on T-Kernel, ITRON, Ubiquitous ID technology, etc. prior to the releases to B- and e-members.
- be ucode providers in addition to being able to receive 48-bit ucode subspace allocation.
- apply for certifications including ucode tag certification.
- participate in committees, working groups, general meetings and seminars.
- disseminate information regarding T-Kernel, ITRON and Ubiquitous ID technology through the T-Engine Forum website or e-mail magazines.
- demonstrate their own products or services related to T-Kernel, ITRON specification OS, and Ubiquitous ID technology to other members by showcasing at general meetings.
- enjoy the privileges that B- and e- members have and can browse all the "members-only websites."

③ B-members

User members who develop products using T-Kernel and ITRON specification OS.

Companies that mainly manufacture hardware, develop various middleware, or provide its development environment, etc., in the embedded systems industry participate in T-Engine Forum using B-member type.

B-members can

- access information on T-Kernel, ITRON, etc., prior to the releases to the public.
- participate in general meetings for B-members and seminars.
- browse the B-members-only website.
- disseminate information regarding T-Kernel, ITRON and various development environments through the T-Engine Forum website or e-mail magazines.
- demonstrate their own products or services related to T-Kernel and ITRON specification OS to other members by showcasing at general meetings.

④ e-members

User members who conduct activities related to the utilization of Ubiquitous ID and eTRON.

Companies that provide products related to ucode tag such as RFID tags, two-dimensional barcodes and active tags, and their reader devices related to Ubiquitous ID technology or web services using ucodes can participate in the forum. Furthermore, the users of such products in all industries and public sectors such as food, retail, distribution, construction and content industries, local governments and government agencies, etc. can participate.

e-members can

- access information on Ubiquitous ID technology prior to the release to the public.
- receive 48-bit ucode subspace allocation. If they pay three or more shares of the annual fee, they can be ucode providers.
- apply for certifications including ucode tag certification.
- participate in general meetings for e-members and seminars.
- conduct various feasibility study experiments using the EAP (Experimental Activity Procedure) system supported by Ubiquitous ID Center.
- browse the e-members-only website.
- disseminate information related to Ubiquitous ID technology through the T-Engine Forum website or e-mail magazines.
- demonstrate their own products or services related to Ubiquitous ID technology to other members by showcasing at general meetings.

⑤ Academic members

Members who conduct academic research and educational activities related to T-Kernel, Ubiquitous ID and eTRON. The condition for admission is "to be an organization that is involved in education."

Members can participate in the forum as a university, faculty, department, or laboratory.

Academic members can

- receive 48-bit ucode subspace allocation.
- participate in seminars.
- browse the Academic members-only website.

⑥ Liaison members

Organizations that conduct the research, development, dissemination and promotion of open architecture which they can promote with T-Engine Forum, and organizations that can collaborate with T-Engine Forum activities. Information is exchanged in both directions.

Liaison members can participate in some types of meetings if the participation is approved by the Executive Committee.

⑦ Supporting members

Members who support T-Engine Forum activities financially.

Supporting members are not involved in the formulation or approval of forum standards.

Supporting members can

- receive 48-bit ucode subspace allocation.
- apply for certifications including ucode tag certification.
- participate in general meetings and seminars.
- browse the Supporting members-only website.

Membership Type/ Activity content	Executive Committee members	A- members	B- members	e- members	Academic members	Liaison members	Supporting members
Participation in Executive Committee meetings	○	×	×	×	×	×	×
Participation in General meetings	○	○	○	○	×	△ ₁	○
Participation in Committee meetings	○	○	×	×	×	△ ₁	×
Participation in WGs	○	○	×	×	×	△ ₁	×
Participation in Seminars	○	○	○	○	○	△ ₁	○
A-members-only website	○	○	×	×	×	×	×
B-members-only website	○	○	○	×	×	×	×
e-members-only website	○	○	×	○	×	×	×
Academic members-only website	○	×	×	×	○	×	×
Liaison members-only website	○	×	×	×	×	○	×
Supporting members-only website	○	×	×	×	×	×	○
ucode Allocation (General)	○	○	×	○	○	×	○
ucode Allocation (Provider)	○	○	×	○ ₂	×	×	○
Monthly e-mail magazine distribution	○	○	○	○	○	○	○

*1: Can participate if approved by the Executive Committee *2: If pay three shares or more

T-Engine Forum Annual Fee and Validity Period of Membership

T-Engine Forum's activities are held on an annual basis from April 1 to March 31. Irrespective of the timing of participation, the membership is valid only for the applicable year. Only a legally incorporated organization can join in T-Engine Forum.

- Executive Committee members..... A-members that pay 3,000,000 yen or more
- A-members..... one share 1,000,000 yen/year (please pay one or more shares)
- B-members..... one share 100,000 yen/year (please pay one or more shares)
- e-members..... one share 100,000 yen/year (please pay one or more shares)
- Academic members..... Free/year
- Liaison members..... Free/year
- Supporting members..... one share 1,000,000 yen/year (please pay three or more shares)

■ Application for participation or inquiries

For various inquiries, please contact T-Engine Forum Secretariat.

In YRP Ubiquitous Networking Laboratory

The 28th Kowa Building, 2-20-1, Nishi-Gotanda, Shinagawa, Tokyo 141-0031, Japan

Tel : +81-3-5437-0572 Fax: +81-3-5437-2399 mail to: office@t-engine.org URL: http://www.t-engine.org