ITRON Newsletter No.12

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New Edition of ITRON Standard Guidebook Issued

The coming of a new ITRON Standard Guidebook edition, heralded for some time in this Newsletter, has at last been fulfilled. Now that the ITRON Technical Committee has completed its work on the Guidebook, Personal Media Corporation has made it available in published form.

The title of the new edition is ITRON Standard Guidebook 2. The contents are focused mainly on μITRON3.0, the latest version of the ITRON kernel specifications. The earlier edition of the ITRON Standard Guidebook consisted of three parts, "For People Who Want to Know about ITRON," "For People Who Want to Use ITRON," and "For People Who Want to Implement ITRON." The new edition adds a fourth part, "The Approach to Standardization in ITRON," which is a collection of papers on matters taken into consideration when ITRON was developed.

The articles introducing μITRON (Ver 2.0) and ITRON2 specifications in the ITRON Standard Guidebook '92-'93 have been replaced in the new edition with articles on μITRON3.0. Other articles still considered applicable have been retained, with revisions bringing them up to date with the current μITRON3.0 specification. The Q&A and References sections have been reorganized, and the Appendix has been expanded, among other changes.

The new edition is highly recommended as a textbook on the ITRON specifications, both for newcomers and those wanting to deepen their knowledge on the subject. Please note that it is currently available only in Japanese.

ITRON-related Publications

Listed in another page are the publications prepared and issued by the ITRON Technical Committee as of December 1, 1994. The ITRON-μITRON Standard

Handbook is a one-volume compilation of μITRON (Ver 2.0) and ITRON2 specifications. Each of the publications below can be obtained directly from the sources indicated.

The latest version of μITRON3.0 is now Ver 3.02.00. Changes made since the μITRON3.0 Standard Handbook was released (Ver 3.00.00) are noted in Newsletter No.5 and No.11, as well as in ITRON Standard Guidebook 2.

The newly issued ITRON Standard Guidebook 2, which is a general introduction to the ITRON specifications, deals primarily with μITRON3.0. Meanwhile, the earlier ITRON Standard Guidebook '92-'93 remains as a valuable reference for use with the μITRON (Ver 2.0) and ITRON2 specifications, even though the dates in its title are now past.

ITRON Panel Session at TRONSHOW '94

A panel discussion on ITRON took place as part of TRONSHOW '94 held this past December in Tokyo. Addressing the topic, "Today's ITRON-specification OS applications," panel members reported on a few of the many areas in which ITRON-specification operating systems are being applied today.

Date: Monday, December 5, 1994 (3:00–5:00pm)
Place: Tokyo Design Center (near Gotanda Station
                                in Shinagawa Ward)
Chair: Hiroaki Takada (University of Tokyo)
Panel members:
  Kiichiro Tamaru (Toshiba Corporation)
  Shinjiro Yamada (Hitachi, Ltd.)
  Satoru Umezawa (Yamaha Corporation)
  Shuji Yura (Japan Minicomputer Systems Co., Ltd.)
  Hiroyuki Muraki (Mitsubishi Semiconductor
                          Software Corporation)
  Kenji Kudoh (Fujitsu Device Limited)
  Akira Matsui (Personal Media Corporation)
  Hiroaki Takada (University of Tokyo)

† This newsletter is reprinted from TRONWARE vol.31 and TRON PROJECT BIMONTHLY No.36.

ITRON-related Publications

Name	Type	Price	Publisher	Issued	ISBN No.
ITRON-μITRON Standard Handbook	Specification (Jap.)	4,800 Yen	Personal Media Co.	1990	4-89362-079-7
μITRON3.0 Standard Handbook	Specification (Jap.)	4,000 Yen	Personal Media Co.	1993	4-89362-106-8
ITRON/FILE Standard Handbook	Specification (Jap.)	3,000 Yen	Personal Media Co.	1992	4-89362-092-4
ITRON Standard Guidebook '92-'93	Textbook (Jap.)	3,500 Yen	Personal Media Co.	1992	4-89362-197-6
ITRON Standard Guidebook 2	Textbook (Jap.)	3,500 Yen	Personal Media Co.	1994	4-89362-133-5
μITRON Specification Ver 2.01.00.00	Specification (Eng.)	12,000 Yen	TRON Association	1989	–
ITRON2 Specification Ver 2.02.00.10	Specification (Eng.)	15,000 Yen	TRON Association	1990	–
μITRON3.0 Specification Ver 3.00.00	Specification (Eng.)	–	TRON Association	1994	–

NOTES:
- Prices do not include consumption tax.
- The documents issued by the TRON Association are available to Association members at a special discount rate.
- English-language specifications are distributed free of charge on the Internet as explained in Newsletter No.8.

ITRON at the TRON Project Symposium

Two papers on ITRON were presented at the Conference session of the Eleventh TRON Project Symposium, held in Tokyo last December.

The first, presented by Yasuro Kawata of the University of Electro-Communications, was on "Eunice/ITRON: A Control System Development Environment for ITRON Machines." The paper consisted mainly of an outline introduction to the Eunice/ITRON development support system, describing in particular the Nike object-oriented programming language at the heart of this system. Nike supports the entire software development life cycle, and the paper covered its features in some detail.

The second paper was delivered by the University of Tokyo's Hiroaki Takada. Entitled, "Experimental Implementations of Priority Inheritance Semaphore on ITRON-specification Kernel," the paper discussed methodology for incorporating a priority inheritance function in a μITRON3.0-specification kernel. This is a function that benefits hard real-time systems. The paper further introduced the results of a performance evaluation based on actual implementation of the function.

Besides these formal papers, a presentation on the topic, "Development of ITRON Specification Real-Time Operating System Simulator on MS-DOS" was presented in a poster session, by K. Matsuura and his colleagues from the Musashi Institute of Technology. At the same time a demonstration of the simulator was run on an actual system – something that is possible because the ITRON specifications are an open architecture.

The Proceedings of the Eleventh TRON Project Symposium have been published by the IEEE Computer Society Press, and are available also from the TRON Association.

On-line distribution of μITRON3.0 specification (English-language edition)

It was announced in ITRON Newsletter No.8 that the English version of the μITRON3.0 Specification had been completed and made available for distribution on the Internet. Since then, however, a number of problems were discovered in the English translation, causing the distribution to be halted. These problems have now been corrected and free distribution has been resumed. We apologize for the delay in making this specification available. The method of downloading the specification on the Internet is explained in ITRON Newsletter No.8.

The specification available on the Internet is Ver 3.00.00. Revisions have been made to that version as detailed in Newsletter No.5 and No.11. It should be noted, however, that the Newsletter translation is done separately from that of the ITRON specifications, resulting in some inconsistencies in terminology usage. We plan to correct this in the future.