

IEICE Global Plaza

—Monthly community plaza in English for students, faculties and engineers—

Essay

Let's Search IEICE Contents through New Metadata System "I-Scover"!



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Prologue

IEICE launched the new metadata search system called "I-Scover" on April 3, 2013 [1]. For the time being, I-Scover provides the metadata search service of all papers published in IEICE transactions covering from the first edition published in 1968 up to the present edition, Technical Reports (from 2006) and international conference papers of ISPA and EMC. The total number of searchable contents reaches 150, 000 as listed in Table 1.

This article briefly introduces I-Scover. Before going to the details, let me start with a quiz. What phrase do you guess if you say "I-Scover" for three times?

Table 1 The coverage of IEICE contents by I-Scover

Publication/event	Coverage	Number of articles
IEICE Transactions (including Japanese Editions)	Papers published since January 1968	About 68,000
IEICE Technical Reports	Conferences/Symposia/Workshops/Colloquia held since June 2004	About 50,000
IEICE General/Society Conferences	IEICE General/Society Conferences held since 2005	About 40,000
ISAP (International Symposium on Antennas and Propagation)	Symposia held in 1971, 1978, 1985, 1989, 1992, 1996, 2000, 2002, 2004, 2007 and 2012	About 3,100
EMC (International Symposium on Electromagnetic Compatibility)	Symposia held in 2004 and 2009	About 400



Fig. 1 View of the top page

What is I-Scover?

The I-Scover is officially designated as the IEICE Knowledge Discovery. Here you can expect a little more meaning; that is a fortunate stroke of serendipity in I-Scover. It will be easy to discover an article which it has been considered difficult to find out with the current Web search systems.

What distinguishes I-Scover from search systems like Google or Yahoo is that I-Scover does not search across whole contents as well as a well-known full-text search, but it provides the metadata search capabilities of IEICE articles. Further, all the metadata can be stored in the data base as

Linked Data in I-Scover.

I-Scover connects not only related metadata within stored ones, but also related data on the Web. This feature is known as Linked Data. According to Wikipedia, the term is used to describe a recommended best practice for exposing, sharing, and connecting pieces of data, information, and knowledge on the Semantic Web using Uniform Resource Identifier (URI) and Resource Description Framework (RDF).

At the current release of I-Scover, the function known as SPARQL Protocol and RDF Query Language (SPARQL) query, is not supported yet. But all data are stored in Linked data format, or more precisely in RDF [2].

Scheme of I-Scover

Fig. 1 shows the top page of I-Scover (See it at <http://i-scover.ieice.org/?lang=en>). The search window provides a basic search that accepts a single search word. If you wish multiple terms search, then push "Advanced search" link.

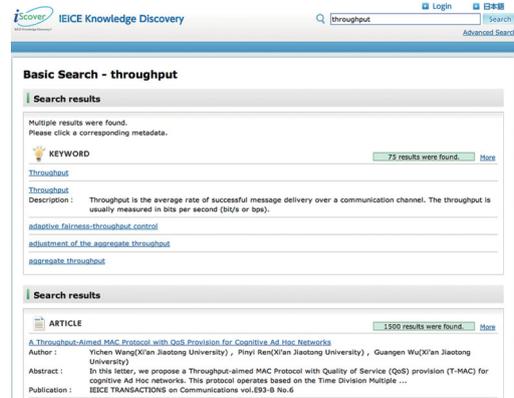


Fig. 2 Example of multiple search results drawn by I-Scover

I-Scover first estimates search results through six metadata, i.e., article, author, organization, keyword, event and publication. When I-Scover finds out multiple search results, it shows the results along with related articles as shown in Fig. 2. On clicking a term at your request, I-Scover immediately displays the results in four different windows; Metadata detail, Related metadata, Related articles and External website search results windows. Fig.3 illustrates an example of keyword metadata. I-Scover outputs not only detail description of the search results, but also it exposes links to the other data. The Linked Data feature of I-Scover enables the provided links to be connected within I-Scover providing continuous exploration of related data, and the following searches.

- Keywords of a designated author's article
- Authors of articles having a designated keyword
- Keywords given to each of articles in a designated event
- Keywords of other articles having one of keywords of a designated article

The above usages may lead serendipity; i.e., when you are looking for something, you will find something of value talent in another. Moreover, the external Website search let you search from CiNii (Scholarly and Academic Information Navigator) by National Institute of Informatics (NII), Google, IEEE Xplorer, ACM Digital Library, and DBpedia.

Let's try I-Scover!

I-Scover is available for anyone without charge. I-Scover works as usual Web search systems. Please note, however, I-Scover does not provide a multiple-terms-search service in the basic search process. When you need search with multiple words, please click "Advanced search". If you have an IEICE membership, we recommend you to login. I-Scover advances some of privileges to IEICE members.

Throughput

Metadata detail

Title: Throughput

Description: Throughput is the average rate of successful message delivery over a communication channel. The throughput is usually measured in bits per second (bps or bps₀).

Keyword (higher in the inheritance tree): Fundamental Theories for Communications

Related articles

Articles having this KEYWORD

ARTICLE 386 results were found.

External website search results

External website: IEEE Xplore | Select

64 results were found.

Fig. 3 Example of search results in keyword metadata window

A minor upgrade will be arranged to the first version in October 2013. Your idea and constructive opinions of expected functions are welcome to enhance I-Scover capabilities. Please inform us of your idea via the "Contact" link in the bottom (footer) page. By the way, the answer to the question in Prologue is "I discover." We hope you will discover treasures of IEICE articles with serendipity.

Reference

[1] IEICE Global Plaza, J. IEICE, vol. 96, no. 6, June 2013.
 [2] F. Nishino, "Linked data to support I-Scover system," IEICE Commun. Soc. Global Newsletter, vol. 37, no. 2, pp. 5-7, June 2013.

Hot Topics

The First IEICE Sponsored Lecture Meeting Successfully Held on the Occasion of the Vietnam Section Inauguration Ceremony



Xuan-Tu Tran, Assoc. Prof. Dr., Deputy Head, UET-Key Lab. For Smart Integrated Systems, VNU University of Engineering and Technology, Hanoi Deputy Rep., IEICE Vietnam Section

IEICE Vietnam Section was authorized by IEICE and established last December. The primary intention of the Section establishment is to accelerate academic activities of Vietnamese society in the field of electronics, information and communication technologies through paper publication, participation in conferences, symposiums, workshops and provision of IEICE sponsored lectures, and simultaneously foster next generation of researchers in collaboration with IEICE. The first event, IEICE sponsored Lecture Meeting was planned and held by the Section on the occasion of the inauguration ceremony of the Section, at VNU University of Engineering and Technology (VNU-UET), in Hanoi, Vietnam on March 15, 2013.

The number of participants in both Inauguration Ceremony and Lecture Meeting reached 82. In the Lecture Meeting, 13 guests presented their invited lectures in the field of electronics, communications and computer science, the four of them joined from Japan. In the Inauguration Ceremony, Prof. Ngoc-Binh Nguyen, Rector of VNU University of Engineering and Technology, the Section Representative, addressed the participants with his Welcome and Opening Speech, and solicited the participants to join IEICE activities (Fig. 4). Successively, Assoc. Prof. Toshimasa Matsuoka, Osaka University (OU) announced the establishment of the Section representing IEICE. Assoc. Prof. Xuan-Tu Tran provided the overview of the program (Fig. 5, 6).

Regarding the four guests from Japan, Prof. Koichiro

Ishibashi, the University of Electro-Communications (UEC) gave a speech entitled "Continuous Challenges for Ultra-Low Power LSI Technologies and Their Impact to ITC Societies", Vietnamese scholar, Assoc. Prof. Cong-Kha Pham, UEC gave a speech entitled "VLSI Research and Education at HCMUS and Cooperation Research between UEC and HCMUS for IC Chips Implementations", Assoc. Prof. Matsuoka gave a speech entitled "CMOS RF Circuit Design for Advanced Wireless Receivers" and another Vietnamese scholar, Prof. Ho Tu Bao, Japan Advanced Institute of Science and Technology (JAIST), gave a speech entitled "Can Big Data Bring Big Value to Service Science?" The other speeches by Vietnamese researchers were given by six guests from VNU-UET, a guest from HoChiMinh Post & Telecom Institute of Technology, Vietnam (PTIT), a guest from HoChiMinh University of Technology (HCMUT) and a guest from Le Quy Don Technical University, in the field of wireless communications, network issues, signal processing, device design and application, and so on. Every speech impressed the participants and activated positive discussion between them and the guest speakers.

The IEICE Vietnam Section plans to provide more forums in the future and your participation will be welcomed. Please visit the Section at <http://www.uet.vnu.edu.vn/ieicevn/>.



Fig. 4 Opening Speech by Prof. N.B. Nguyen, Representative of IEICE Vietnam Section



Fig. 5 Commencement of IEICE Vietnam Section with Guest Speakers from Japan



Fig. 6 Invited lecture given by Assoc. Prof. Toshimasa Matsuoka,

2013 IEICE Society Conference Will Be Held in Fukuoka, Japan on September 17-20
IEICE-TFIPP

IEICE Society Conference will be held at Fukuoka Institute of Technology, in Fukuoka, Japan, on September 17-20, 2013. The consecutive complete English Session BS-7 entitled "Design, Control and Management of Network and Service" will be provided during the Conference. For the details, please visit http://www.toyoag.co.jp/ieice/E_S_top/e_s_top.html/.

Message from TFIPP Secretariat

This issue is delivered also by a free mail magazine "IEICE Global Plaza on Line" with updated news of interest for you. Please contact Prof. Takahashi, TFIPP (Task Force for International Policy and Planning) at global@ieice.org, if you need. Back numbers are available in archives at: http://www.ieice.org/eng/global_plaza/index.html/.

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