

การใช้งานฐานข้อมูล

IEEE/IEE Electronic Library (IEL)

โดย จีรวัตน์ พรหมพร

jirawat@book.co.th

บริษัท บุ๊ค โปรดักชั่น แอนด์ เซอร์วิส จำกัด

โครงการพัฒนาเครือข่ายระบบห้องสมุดในประเทศไทย
Thai Library Integrated System (ThaiLIS)

- **IEL คืออะไร**
- **หน้าจอหลัก (Home)**
- **การค้นหาค้นหาบทความแบบไล่เรียงตามประเภทเอกสาร (Browse)**
 - **วารสาร (Journals & Magazines)**
 - **เอกสารการประชุมวิชาการ (Conference Proceedings)**
 - **เอกสารมาตรฐาน (Standards)**
 - **หนังสือ (Books)**
- **วิธีการสืบค้นเอกสาร**
 - **Basic Search**
 - **Author Search**



- **Advanced Search**
- **Truncations & Wildcards**
- **หน้าแสดงผลลัพธ์ (Search Results)**
- **หน้าแสดงเอกสาร**
 - **AbstractPlus**
 - **Reference Links**
 - **Citing Documents**
- **เอกสารฉบับเต็ม (Full Text)**
- **พิมพ์/บันทึก/ดาวน์โหลดรายการบรรณานุกรม**
- **CrossRef Search**
- **Alert**



**IEEE Xplore : เป็นเครื่องมือที่ใช้ในการสืบค้น
สารนิเทศจากแหล่งข้อมูล The Institute of Electrical
and Electronics Engineers (IEEE) และ The
Institution of Electrical Engineers (IEE) ซึ่งใน
IEEE Xplore ประกอบด้วยเอกสารมากกว่า 1.2 ล้าน
จากสิ่งพิมพ์มากกว่า 12,000 ชื่อ ซึ่งสามารถแยก
ประเภทของสิ่งพิมพ์ได้ดังนี้**

- **Journals, Transactions, และ Magazines ของ IEEE** ย้อนหลังถึงมกราคม 1988 และเนื้อหาบางฉบับย้อนหลังถึงปี 1952
- **Conference Proceedings ของ IEEE** ให้ข้อมูลย้อนหลังถึงมกราคม 1988 และเนื้อหาบางเรื่องย้อนหลังถึงปี 1953
- **IEEE Standards** ให้ข้อมูลย้อนหลังถึงมกราคม 1988 รวมถึงมาตรฐานเก่าที่ยกเลิกไปแล้ว
- **IEE Journals, Letters, Magazines และ Conference Proceedings** ให้ข้อมูลตั้งแต่ปี 1988



เนื้อหาที่ครอบคลุม

- **Acoustics**
- **Biomedical Eng**
- **Computing**
- **Electrical Eng**
- **Industrial Eng**
- **Info Systems**
- **Nuclear Science**
- **Physics**
- **Remote Sensing**
- **Storage**
- **Web Applications**
- **Aerospace**
- **Biometrics**
- **Cybernetics**
- **Civil Eng**
- **Info Technology**
- **Optics**
- **Radiology**
- **Software**
- **Transportation**
- **Wireless**



IEL

Search Methods

▶ **Browse**

▶ **Search**

1,318,251 documents online

BROWSE

SEARCH

IEEE XPLORE GUIDE

SUPPORT

Welcome to IEEE Xplore

... delivering full text access to the world's highest quality technical literature in electrical engineering, computer science, and electronics.

Browse

- » Journals & Magazines
- » Conference Proceedings
- » Standards
- » Books

Basic Search



(All Fields)

- » Advanced Search
- » Author Search
- » CrossRef Search

Content Updates **1**

Browse the latest update to see recently added content.

- » Latest Content Update

Top 100 Documents **2**

Find out the most accessed documents for the month.

- » View Top 100

IEEE Peer Review

Publishing the highest quality technical literature

- » Find out more

Alerts **3**

Register and access your tables of contents alerts.

- » Visit Alerts

Books

IEEE books are available for purchase from Wiley-IEEE Press and Wiley-IEEE Computer Society Press.

- » Find out more
- » Browse Books

IEEE Spectrum Magazine

Visit the Web site of IEEE's flagship magazine.



1. เลือกดูเฉพาะเนื้อหาล่าสุดที่ได้รับการปรับปรุงในรอบเดือน

2. เลือกดูบทความที่มีผู้นิยมอ่านร้อยอันดับแรก

3. รับบริการแจ้งเตือนความทันสมัยของเนื้อหา

1,318,251 documents online

BROWSE

SEARCH

IEEE XPLORE GUIDE

SUPPORT

Welcome to IEEE Xplore

... delivering full text access to the world's highest quality technical literature in electrical engineering, computer science, and electronics.

Browse

- » Journals & Magazines
- » Conference Proceedings
- » Standards
- » Books

Basic Search



(All Fields)

- » Advanced Search
- » Author Search
- » CrossRef Search

Content Updates

Browse the latest update to see recently added content.

- » Latest Content Update

Top 100 Documents

Find out the most accessed documents for the month.

- » View Top 100

IEEE Peer Review

Publishing the highest quality technical literature

- » Find out more

Alerts

Register and access your tables of contents alerts.

- » Visit Alerts

Books

IEEE books are available for purchase from Wiley-IEEE Press and Wiley-IEEE Computer Society Press.

- » Find out more
- » Browse Books

IEEE Spectrum Magazine

Visit the Web site of IEEE's flagship magazine.



Browse: การค้นคืนจากการไล่เรียงเนื้อหาตามชนิดของสิ่งพิมพ์

CHOOSE: All Titles IEEE Titles IEE Titles

OPTION 1

Browse by keyword

Enter one or more keywords in the order they appear in the journal or magazine title.

OPTION 2

Browse alphabetically

Select a letter to view titles beginning with that letter.

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Journals & Magazines

Select the [+] symbol to view a publication's title history:

- Acoustics, Speech, and Signal Processing Newsletter, IEEE
- Advanced Packaging, IEEE Transactions on [see also Component Packaging and Manufacturing Technology, Part B: Advanced Packaging, IEEE Transactions on]
- Aerospace and Electronic Systems Magazine, IEEE
- Aerospace and Electronic Systems, IEEE Transactions on
- Annals of the History of Computing, IEEE
- Antennas and Propagation Magazine, IEEE
- Antennas and Propagation, IEEE Transactions on
- Antennas and Wireless Propagation Letters
- Applied Superconductivity, IEEE Transactions on
- Automatic Control, IEEE Transactions on
- Automation Science and Engineering, IEEE Transactions on [see also Robotics and Automation, IEEE Transactions on]

1. พิมพ์คำเพียงบางส่วนจากชื่อวารสาร และคลิกปุ่ม Go

2. หรือไล่เรียงดูรายชื่อวารสารตามลำดับตัวอักษร

3. คลิกเลือกจากรายชื่อวารสาร



IEEE TRANSACTIONS ON ADVANCED PACKAGING

Journals & Magazines

1 Year:
 Issue:

Search This Publication

2

Frequency: 4

ISSN: 1521-3323

Subject Category: Packaging

Published by: IEEE Components, Packaging, and Manufacturing Technology Society
 IEEE Lasers and ElectroOptics Society

Visit the Website: [IEEE Transactions on Advanced Packaging](#)

Title History

(1994 - 1998) Components, Packaging, and Manufacturing Technology, Part B: Advanced Packaging, IEEE Transactions on [see also Components, Hybrids, and Manufacturing Technology, IEEE Transactions on]
 (1978 - 1993) Components, Hybrids, and Manufacturing Technology, IEEE Transactions on [see also IEEE Trans. on Components, Packaging, and Manufacturing Technology, Part A, B, C]
 (1971 - 1977) Parts, Hybrids, and Packaging, IEEE Transactions on
 (1965 - 1971) Parts, Materials and Packaging, IEEE Transactions on

Aims and Scope

IEEE Transactions on Advanced Packaging was the number two most-cited journal in manufacturing engineering in 2003, according to the annual Journal Citation Report (2003 edition) published by the Institute for Scientific Information. This publication has its focus on the design, modeling, and application of interconnection systems and packaging: device packages, wafer-scale and multichip modules, TAB/BGA/SMT, electrical and thermal analysis, opto-electronic packaging, and package reliability.

Contacts

Editor-in-Chief
 Ganesh Subbarayan

Publication Information

Editorial Board

Announcements

Content Announcements

1. เลือกปีที่ตีพิมพ์และฉบับที่ต้องการ

2. สืบค้นเนื้อหาทั้งหมดจากวารสารชื่อที่เปิดอยู่

3. รายละเอียดข้อมูลวารสาร

Table of Contents

BROWSE

SEARCH

Journals & Magazines



IEEE TRANSACTIONS ON ADVANCED PACKAGING

Volume: 28 Issue: 1 Date: Feb. 2005

printer friendly

Other Years:

Other Issues:

Search this issue:

All Fields



Publication Information

- Table of Contents
- Editorial Board

Announcements

- Content Announcements

Author Resources

- IEEE Information
- Additional Information
- Instructions

Society Information

Article Information

Foreword

Rahal-Arabi, T.

Page(s): 2- 3

[Abstract](#) | [Full Text: PDF \(144 KB\)](#)

Extraction of ϵ_{eff} and $\tan \delta_{\text{eff}}$ for printed circuit board insulators up to 30 GHz using the short-pulse propagation technique

Debnath, A.; Winkel, ¹ Kopcsay, G.V.; Surovic, C.W.; Rubin, B.J.; Katopis, G.A.; Chamberlin, B.J.; Krabbenhoft, R.S.
Page(s): 4- 12 ²

[Abstract](#) | [Full Text: PDF \(1224 KB\)](#)

1. เรียกดูสารระสังเขป

2. เรียกดูบทความฉบับเต็มรูปแบบ PDF

CHOOSE: All Titles IEEE Titles IEE Titles

OPTION 1

Browse by keyword

Enter one or more keywords in the **1** they appear in the conference proceedings.

OPTION 2

Browse alphabetically

Select a letter to view titles beginning with the letter.

A B C D E F G H I J K L M N O P Q **2** R S T U V W X Y Z

Conference Proceedings

Select the [+] symbol to view a publication's title history:

- 100 Years of Radio, 1995., International Conference on
- +** 3-D Digital Imaging and Modeling, International Conference on
- 3-D Imaging Techniques for Medicine, IEE Colloquium on
- +** 3D Data Processing Visualization and Transmission, International Symposium on
- 3D Imaging and Analysis of Depth/Range Images, IEE Colloquium on
- 3G Mobile Communication Technologies, 2000. First International Conference on (IEE Conf. Publ. No. 471)
- 3G Mobile Communication Technologies, 2001. Second International Conference on (Conf. Publ. No. 477)
- 3G Mobile Communication Technologies, 2002. Third International Conference on (Conf. Publ. No. 489)
- 3G Mobile Communication Technologies, 2003. 3G 2003. 4th International Conference on (Conf. Publ. No. 494)
- 50kV Autotransformer Traction Supply Systems - the French Experience, IEE Colloquium on
- A Practical Approach to the Protection of Industrial Power Systems Networks up to 11kV (Ref. No. 1999/062), IEE Colloquium on
- A Systems Approach to Manufacturing (Digest No: 1996/171), IEE Colloquium on

1. พิมพ์คำเพียงบางส่วนของการประชุม และคลิกปุ่ม Go

2. หรือไล่เรียงดูรายชื่อการประชุมตามลำดับตัวอักษร

3. คลิกเลือกตามชื่อการประชุม

➤ Browse by keyword

Enter a standard number or **1** or more keywords in the order they appear in the standard title.

Standards

Standard Number

IEEE Std 1002-1987

IEEE Std 1003.0-1995

IEEE 1076-CONC-1990

IEEE 1070-1995

IEEE 730-1989

IEEE C37.09g-1991 (Supplement to IEEE C37.09-1979)

IEEE C62.31-1987

IEEE C57.12.26-1992

IEEE C37.09a-1991 (Supplement to IEEE C37.09-1979)

IEEE C37.04h-1990 (Supplement to IEEE C37.04-1979)

IEEE C37-04f-1990 (Supplement to IEEE C37.04 1979)

IEEE C62.92.1-1987

IEEE C62.92.2-1989

IEEE Std 1-2000

IEEE 802.5v-2001

Standard Title

IEEE standard taxonomy for software engineering standards

IEEE guide to the POSIX Open System Environment (OSE)

The Sense of VASG

IEEE Guide For The Design And Testing Of Transmission Modular Restoration Structure Components

IEEE Standard for Software Quality Assurance Plans

Supplement To IEEE Standard Test Procedure For AC High-voltage Circuit Breakers Rated On A Symmetrical Current Basis

IEEE Standard Test Specifications For Gas-Tube Surge-protective Devices

IEEE Standard for Pad-mounted, Compartmental-Type, Self-cooled, Three-phase Distribution Transformers for Use with Separable Insulated High-voltage Connectors (34 500 Grd Y/19 920 V and Below, 2500 Kva and Smaller)

Supplement To IEEE Standard Test Procedure For Ac High-voltage Circuit Breakers Rated On A Symmetrical Current Basis **2**

Supplement To IEEE Standard Rating Structure For AC High-Voltage Circuit Breakers Rated On A Symmetrical Current Basis

Supplement To IEEE Standard Rating Structure For AC High-Voltage Circuit Breakers Rated On A Symmetrical Current Basis

An American National Standard IEEE Guide For The Application Of Neutral Grounding In Electrical Utility Systems

IEEE Guide For The Application of Neutral Grounding In Electrical Utility Systems Part II- grounding Of Synchronous Generator Systems

IEEE recommended practice - general principles for temperature limits in the rating of electrical equipment and for the evaluation of electrical insulation

IEEE standard for information technology - telecommunications and information exchange between systems - Local and metropolitan area networks - Specific requirements. Part 5: token ring access method and physical layer specifications. Amendment 5: gigabit token ring operation

1. พิมพ์หมายเลขมาตรฐานหรือคำสำคัญในชื่อมาตรฐานแล้วคลิกปุ่ม Go

2. คลิกเลือกมาตรฐานที่ต้องการ

» Recently Published Books

Modern Antenna Design
by Milligan, T. A.
Hardcover, Edition: 2

Negative-Refraction Metamaterials
by Eleftheriades, G. V. Balmain,
K.
Hardcover, Edition: 1

Fourier Analysis on Finite Groups
with Applications in Signal
Processing and System Design
by Stankovic, R. S. Moraga, C.
Astola, J.
Hardcover, Edition: 1

Practical Design of Power Supplies
by Lenk, R.
Hardcover, Edition: 1

Digital Transmission Engineering
by Anderson, J. B.
Hardcover, Edition: 2

Books



OPTION 1

Browse by keyword

Enter one or more keywords in the order they appear in the book title



OPTION 2

Browse alphabetically

Select a letter to view titles beginning with that letter.

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

A Field Guide to Dynamical Recurrent Networks

by Kolen, J. F. Kremer, S. C.
Hardcover, Edition: 1, ISBN: 0780353692

A History of Computing Technology

by Williams, M. R.
Paperback, Edition: 2, ISBN: 0818677392

Accelerated Stress Testing Handbook

by Chan, H. A.
Hardcover, Edition: 1, ISBN: 0780360257

คลิกเลือกรายชื่อหนังสือที่สนใจ

» Recently Published Books

Modern Antenna Design
by Milligan, T. A.
Hardcover, Edition: 2

Negative-Refraction Metamaterials
by Eleftheriades, G. V. Balmain,
K.
Hardcover, Edition: 1

Fourier Analysis on Finite Groups
with Applications in Signal
Processing and System Design
by Stankovic, R. S. Moraga, C.
Astola, J.
Hardcover, Edition: 1

Practical Design of Power Supplies
by Lenk, R.
Hardcover, Edition: 1

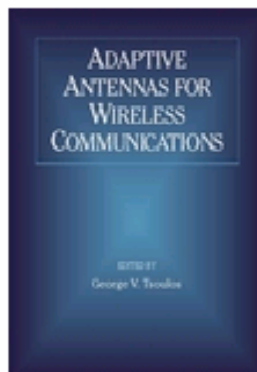
Digital Transmission Engineering
by Anderson, J. B.
Hardcover, Edition: 2

» Download Citations

Citation ▼

EndNote, ProCite, RefMan ▼ >>

» Learn more



Adaptive Antennas for Wireless Communications

Tsoulos, G. V.

Sponsored by the IEEE Antennas and Propagation Society
Publication Date: January 2001
Wiley-IEEE Press
Paperback
Number of Pages: 776
Edition: 1
ISBN: 0780360168

Price: US \$145.00 » Buy at Wiley.com

Before buying this book, please check with your librarian or information professional. A copy may already be available to you at no additional cost.



IEEE ANTENNAS &
PROPAGATION SOCIETY

Abstract

Electrical Engineering Adaptive Antennas for Wireless Communications In the past decade, the wireless communications community recognized adaptive antennas as a core technology that would help existing systems overcome problems related to spectrum efficiency and provide a vehicle to achieve the ambitious requirements of next-generation networks. The communications industry has already begun to develop adaptive antenna systems for commercial use and at the same time is working with standardization institutes around the world to produce adaptive antenna-friendly standards. Adaptive Antennas for Wireless Communications is a concise, detailed resource of information for all critical issues related to this technology and is compiled from the original published work of experts in the field. The extensive literature covers:

Books

Welcome to IEEE Xplore

... delivering full text access to the world's highest quality technical literature in electrical engineering, computer science, and electronics.

Browse

- » Journals & Magazines
- » Conference Proceedings
- » Standards
- » Books

Basic Search

1 fiber optics **2**

(All Fields)

- » Advanced Search
- » Author Search
- » CrossRef Search

1. พิมพ์คำค้น

2. คลิกปุ่ม GO เพื่อทำการสืบค้น

Search Results

BROWSE

SEARCH

IEEE XPLORE GUIDE

SUPPORT

Results for "**((fiber optic)<in>metadata)**"

Your search matched **6220** of **1142142** documents.

A maximum of **100** results are displayed, **25** to a page, sorted by **Relevance** in **Descending** order.

e-mail printer friendly

» View Session History

» New Search

» Key

IEEE JNL IEEE Journal or Magazine


IEE JNL IEE Journal or Magazine

IEEE CNF IEEE Conference Proceeding

IEE CNF IEE Conference Proceeding

IEEE STD IEEE Standard

Modify Search

((fiber optic)<in>metadata) 

Check to search only within this results set

Display Format: Citation Citation & Abstract

Select Article Information

View: 1-25 | 26-50 | 51-75 | 76-100

- 1. Optical pressure measurement: using fiber optic transducers in hypersonic flight vehicles**
Land, H.B., III; Eddins, C.L.;
Instrumentation & Measurement Magazine IEEE
Volume 7, Issue 3, Sept. 2004 Page(s) 38 - 45
AbstractPlus | References | Full Text: PDF(3528 KB) **IEEE JNL**
- 2. Fiber optic "air-blown" solutions**
Gorrell, P.;
WESCON/96
22-24 Oct. 1996 Page(s):189 - 193
AbstractPlus | Full Text: PDF(376 KB) **IEEE CNF**

1. เรียกดูสาระสังเขป

2. เรียกดูรายการที่ใช้อ้างอิง

3. เรียกดูบทความฉบับเต็มรูปแบบ PDF

4. ปรับปรุงการสืบค้น

OPTION 1

Quick Find an Author:

Enter a name to locate articles written by that author.

 1 >>

Example: Enter Lockett S to obtain a list of authors with the last name Lockett and the first initial S.

OPTION 2

Browse alphabetically

Select a letter from the list.

A B C D E F G H I J K L M N O P Q R S T U V W X Y**Z****2**

Select a name to view articles written by that author

A Min Tjoa	A Tavora A. S.	A'Hearn K.
A'Ortendahl D.	A'ain A. K. B.	A-Buraiky S.
A-Chang Hsu	A-Cheng Wu	A-Firna T.
A-Khatib M. M.	A-Ning Du	A-Ping Zhang
A-Rahim A. A. 3	A-Rum Jun	A-Shamsi S.
A-Xin Nie	A. C. Tsoi	A. Fung
A. H. You	A. L. Y. Low	A. LaRiviere H. J.
A. T. S. Wee	A. Twumasi Y.	Aa Johannessen E.
Aa'lam N.	Aaberg I. A.	Aabo T.
Aabo Y.	Aaby A. A.	Aaccardo A.
Aach T.	Aad I.	Aadahl P.
Aadland O.	Aadrul Islam A. K. M.	Aadsen D.
Aadsen D. R.	Aaen I.	Aaen P. H.
Aagaah M. R.	Aagaard E.	Aagaard J.
Aagaard M.	Aagaard M. D.	Aagard E. G. R.
Aagard R.	Aage C.	Aagedal H.
Aagedal J. O.	Aagesen F. A.	

Next 50

1. พิมพ์ชื่อสกุลผู้แต่ง แล้วคลิก Go

2. ไล่เรียงดูรายชื่อผู้แต่งตามลำดับตัวอักษร

3. คลิกเลือกชื่อผู้แต่งที่ต้องการ

Advanced Search

OPTION 1

Enter keywords or phrases, select fields, and select operators

Help

1 "fiber optics" in 2 All Fields

3 AND communication in All Fields

AND

OR

NOT

Full Text & All Fields

Document Title

Author

Publication Title

Abstract

Index Terms

Affiliation

Run Search

Reset

Note: If you use all three search boxes, the first two take precedence over the entry in the third box.

OPTION 2

Enter keywords, phrases, or a Boolean expression

Help

7 (Internet <and> network)<in> ti

Run Search

Reset

Note: You may use the search operators <and> or <or> without the start and end brackets <>.

Learn more about Field Codes, Search Examples, and Search Operators

Publications

Select publications

- IEEE Periodicals
- IEE Periodicals
- IEEE Conference Proceedings
- IEE Conference Proceedings
- IEEE Standards

Other Resources (Available for Purchase)

- IEEE Books

Select date range

- Search latest content update (19 Dec 2005)
- From year All to Present

Display Format

- Citation
- Citation & Abstract

Organize results

- Maximum 100
- Display 25 results per page
- Sort by Relevance
- In Descending order

1. พิมพ์คำค้น
2. เลือกเขตข้อมูล
3. ใช้คำเชื่อมหากมีคำค้นมากกว่า 1 ช่อง
4. กำหนดประเภทสิ่งพิมพ์
5. กำหนดช่วงระยะเวลา
6. เลือกรูปแบบการแสดงผล
7. หรือใส่ชุดคำสั่ง
8. คลิก Run Search



▶ Operators

Logical Operators

<and>, <or>, <not>

Proximity Operators

<in>, <paragraph>, <sentence>, <phrase>, <near>

▶ Wildcards and truncations

? = แทนที่ตัวอักษรหนึ่งตัวอักษร เช่น

wom?n = women หรือ woman

* = ละตัวอักษรตั้งแต่ศูนย์ตัวอักษรขึ้นไป เช่น

child! = child, children, childish

Results for "{'fiber optics'<in>metadata) <and> (communication<in>metadata)" ✉ e-mail 🖨 printer friendly

Your search matched **263** of **1142142** documents.

A maximum of **100** results are displayed, **25** to a page, sorted by **Relevance** in **Descending** order. 5 4

» View Session History

» New Search

» Key

IEEE JNL IEEE Journal or Magazine

IEE JNL IEE Journal or Magazine

IEEE CNF IEEE Conference Proceeding

IEE CNF IEE Conference Proceeding

IEEE STD IEEE Standard

Modify Search 6

{'fiber optics'<in>metadata) <and> (communication<in>metadata) »

Check to search only within this results set

Display Format: Citation Citation & Abstract

Select **Article Information**

View: 1-25 | 26-50 | 51-75 | 76-100

- 1. Personal communications access networks using subcarrier multiplexed optical links**
Tonguz, O.K.; Hanwook Jung;
Lightwave Technology Journal of
Volume 14, Issue June 1996 Page(s): 1400 - 1409
AbstractPlus | References | Full Text: PDF(920 KB) **IEEE JNL**
- 2. In process development of an advanced undergraduate communications laboratory**
Munoz, M.; Garrod, S.;
Frontiers in Education Conference, 1997. 27th Annual Conference. 'Teaching and Learning in an Era of Change'. Proceedings.
Volume 2, 5-8 Nov. 1997 Page(s):751 - 755 vol.2
AbstractPlus | Full Text: PDF(504 KB) **IEEE CNF**

1. เรียกดูสาระสังเขป

2. รายการที่ใช้อ้างอิง


3. เรียกดูเอกสารฉบับเต็มแบบ PDF

4. ส่งพิมพ์รายการผลลัพท์

5. ส่งรายการผลลัพท์ทาง E-mail

6. ปรับปรุงการสืบค้น

Document options

 Full Text: PDF (454 KB)

Download this citation

Choose

Download

[Download](#)

[» Learn More](#)

Rights & Permissions



[» Learn More](#)

Personal **communication** access networks multiplexed optical links

AbstractPlus

Tonguz, O.K. Hanwook Jung
Dept. of Electr. & Comput. Eng., State Univ. of New York, Buffalo, NY, USA;

This paper appears in: **Lightwave Technology, Journal of**

Publication Date: June 1996

Volume: 14 , Issue: 6

On page(s): 1400 - 1409

ISSN: 0733-8724

CODEN: JLTEDG

INSPEC Accession Number:5319063

DOI: 10.1109/50.511670

Posted online: 2002-08-06 20:29:52.0

Abstract

One of the major challenges for future personal **communication** systems (PCS) and personal **communication** networks (PCN) is the capacity needed to meet the growing demand. In this paper, **fiber optics** and wavelength division multiplexing (WDM) technology is proposed, and shown to be a cost-effective solution to this problem. In particular, it is shown that the mature **fiber-optics** and WDM technology could be used in conjunction with subcarrier multiplexing in microcells in order to transmit messages from subscribers to central base station (uplink) and in the opposite direction too. The access backbone network architecture of such a PCN is also investigated and key problems associated with it are highlighted

Index Terms

Inspec

Controlled Indexing

optical fibre subscriber loops personal **communication** networks subcarrier multiplexing wavelength division multiplexing

Non-controlled Indexing

WDM access backbone network architecture central base station **fiber optics** mature **fiber-optics** microcells personal **communication** networks personal **communication** systems personal **communications** access networks subcarrier multiplexed optical links subcarrier multiplexing subscribers transmit messages uplink wavelength division multiplexing

Author Keywords

Not Available

References

No references available on IEEE Xplore.

Citing Documents

- 1 Multiaccess processor interconnection using subcarrier and wavelength division multiplexing, Chen-Ken Ko; Sy-Yen Kuo
Lightwave Technology, Journal of
On page(s): 228-241, Volume: 15, Issue: 2, Feb 1997
[Abstract](#) | [Full Text: PDF \(400\)](#)

□ References

References

- 1 V. H.MacDonald, "The cellular concept," *The Bell Syst. Tech. J.*, vol. 58, no. 1, pp. 16-41, Jan. 1979.
- 2 D. C.Cox, "Wireless personal communications: What is it?," *IEEE Personal Commun., The Mag. Nomadic Commun. Comput.*, vol. 2, pp. 20-35, Apr. 1995.
[Abstract](#) | [Full Text: PDF \(1568KB\)](#)
- 3 L. J.Greenstein, N.Amitay, and T-SChu *et al.*, "Microcells in personal communications systems," *IEEE Commun. Mag.*, vol. 30, pp. 76-88, Dec. 1992.
[Abstract](#) | [Full Text: PDF \(1616KB\)](#)
- 4 T.Chu and M. J.Gans, "Fiber Optic Microcellular Radio," *IEEE Trans. Veh. Technol.*, vol. 40, pp. 599-606, Aug. 1991.
[Abstract](#) | [Full Text: PDF \(640KB\)](#)
- 5 W. I.Way, "Optical Fiber-Based Microcellular Systems: An Overview," *IEICE Trans. Commun.*, vol. E76-B, pp. 1091-1093, Sept. 1993.
- 6 O. K.Tonguz and H.Jung, "PCS network using subcarrier multiplexed fiber optic links : capabilities and limitations," *Proc. 45th IEEE Veh. Technol. Conf.* Chicago, IL, pp. 155-159, July 1995.
[Abstract](#) | [Full Text: PDF \(476KB\)](#)
- 7 D. M.Fye, "Design of fiber optic antenna remote links for cellular radio application," *Proc. 40th IEEE Veh. Technol. Conf.*, pp. 622-625, 1990.
[Abstract](#) | [Full Text: PDF \(248KB\)](#)

Citing Documents











- 1 Multiaccess processor interconnection using subcarrier and wavelength division multiplexing, Chen-Ken Ko; Sy-Yen Kuo
Lightwave Technology, Journal of
On page(s): 228-241, Volume: 15, Issue: 2, Feb 1997
[Abstract](#) | [Full Text: PDF \(400\)](#)
- 2 Dynamic range requirements for microcellular personal communication systems using analog fiber-optic links, Fan, J.C.; Lu, C.L.; Kazovsky, L.G.
Microwave Theory and Techniques, IEEE Transactions on
On page(s): 1390-1397, Volume: 45, Issue: 8, Aug 1997
[Abstract](#) | [Full Text: PDF \(164\)](#)
- 3 Antenna interconnection strategies for personal communication systems, Yanikomeroglu, H.; Sousa, E.S.
Selected Areas in Communications, IEEE Journal on
On page(s): 1327-1336, Volume: 15, Issue: 7, Sep 1997
[Abstract](#) | [Full Text: PDF \(276\)](#)
- 4 Optically coherent direct modulated FM analog link with phase noise canceling circuit, Taylor, R.; Forrest, S.
Lightwave Technology, Journal of
On page(s): 556-563, Volume: 17, Issue: 4, Apr 1999
[Abstract](#) | [Full Text: PDF \(212\)](#)
- 5 Spread-spectrum techniques for fiber-fed microcellular networks, Koshy, B.J.; Shankar, P.M.
Vehicular Technology, IEEE Transactions on
On page(s): 847-857, Volume: 48, Issue: 3, May 1999
[Abstract](#) | [Full Text: PDF \(264\)](#)
- 6 Transporting CDMA signals over an analog optical link, Woodward, S.L.; Ariyavisitakul, S.
Vehicular Technology, IEEE Transactions on
On page(s): 1033-1038, Volume: 48, Issue: 4, Jul 1999
[Abstract](#) | [Full Text: PDF \(116\)](#)
- 7 Random spacing channel assignment to reduce the nonlinear intermodulation distortion in cellular mobile communications, Hanwook Jung; Tonguz, O.K.
Vehicular Technology, IEEE Transactions on

<http://ieeexplore.ieee.org/iel5/50/33146/01561399.pdf?tp=&arnumber=1561399&isnumber=33146> - Microsoft Internet Expl...

File Edit Go To Favorites Help

Back Forward Stop Home Search Favorites Media

Address <http://ieeexplore.ieee.org/iel5/50/33146/01561399.pdf?tp=&arnumber=1561399&isnumber=33146> Go

Print, Save

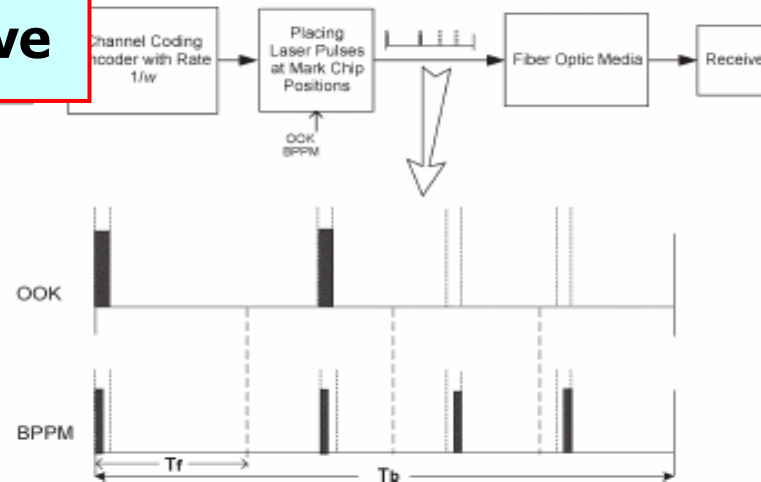


Fig. 1. Block diagram of the internally coded FTH FO-CDMA system. In this figure, the arrangements of the optical pulses for coded symbols {1,1,0,0} at an internally coded FTH FO-CDMA system are also shown for OOK and BPPM schemes.

system. By using the FTH technique in conjunction with internal coding, the number of users drastically increases, thereby enhancing the bandwidth efficiency of an optical CDMA system with respect to that of a WDM system.

B. Internally Channel-Coded FTH FO-CDMA System

In an internal channel-coding scheme, the input data are channel coded with an easily implementable code with a rate



Print & Save

Welcome to IEEE Xplore 2.0: Personal communications access networks using subcarrier multiplexed - Microsoft Internet Explorer

File Edit View Favorites Tools Help

New
Open... Ctrl+O
Edit with Notepad
Save Ctrl+S
Save As...
Page Setup...
Print... Ctrl+P
Print Preview...
Send
Import and Export...
Properties
Work Offline
Close

Search Favorites Media

Home | Help
IEEE
< Back to Previous Page

Personal communications access networks using subcarrier multiplexed


Book Jung
Dept. of Comput. Eng., State Univ. of New York, Buffalo, NY;

Journal: **Lightwave Technology, Journal of**
1996

Volume: 14, Issue: 6
On page(s): 1400-1409
[SSN: 0733-8724](#)
References Cited: 37
CODEN: JLTEDG
INSPEC Accession Number: 5319063
DOI: 10.1109/50.511670
Posted online: 2002-08-06 20:29:52.0

Abstract
One of the major challenges for future personal communication systems (PCS) and personal communication networks (PCN) is the capacity needed to meet the growing demand. In this paper, fiber optics and wavelength division multiplexing (WDM) technology is proposed, and shown to be a cost-effective solution to this problem. In particular, it is shown that the mature fiber-optics and WDM technology could be used in conjunction with subcarrier multiplexing in microcells in order to transmit messages from subscribers to central base station (uplink) and in the opposite direction too. The access backbone network architecture of such a PCN is also investigated and key problems associated with it are highlighted

Document options

 Full Text: PDF (454 KB)

Download

Choose Citation

Download EndNote, ProCite, RefMan

EndNote, ProCite, RefMan

» Learn More

Rights & Permissions



» Learn More

Personal **communications** access networks using subcarrier multiplexed optical links

Tonguz, O.K. Hanwook Jung

Dept. of Electr. & Comput. Eng., State Univ. of New York, Buffalo, NY, USA;

This paper appears in: **Lightwave Technology, Journal of**

Publication Date: June 1996

Volume: 14, Issue: 6

On page(s): 1400 - 1409

ISSN: 0733-8724

CODEN: JLTEDG

INSPEC Accession Number: 5319063

DOI: 10.1109/50.511670

Posted online: 2002-08-06 20:29:52.0

Abstract

One of the major challenges for future personal **communication** systems (PCS) and personal **communication** networks (PCN) is the capacity needed to meet the growing demand. In this paper, **fiber optics** and wavelength division multiplexing (WDM) technology is proposed, and shown to be a cost-effective

1. เลือก Download เฉพาะรายการบรรณานุกรม หรือ พร้อมด้วยสาระสังเขป

2. เลือกชนิดการ Download เช่น Endnote หรือ Format ASCII Text

3. คลิกปุ่ม Download



IEL

Download Citation

The screenshot shows the EndNote 7 (Bld 98) interface. The top window is titled "EndNote 7 (Bld 98) - [test.enl]" and the bottom window is titled "EndNote 7 (Bld 98) - [Willebrand, 2001 #1]". Both windows have a menu bar (File, Edit, References, Tools, Window, Help) and a toolbar. The bottom window's toolbar includes a "Reference Type" dropdown menu set to "Journal Article". The main content area of the bottom window displays the following citation information:

Label:

Keywords:
laser beam applications
optical communication
free-space optics technology
high-speed residential access
hybrid fiber-laser systems
link heads
low-power infrared beams
optical communication
transceivers

Abstract:
Low-power infrared beams, which do not harm the eyes, are the means by which free-space optics (FSO) technology transmits data through the air between transceivers, or link heads, mounted on roof-tops or behind windows. It works over distances of several hundred meters to a few kilometers, depending upon atmospheric conditions. The authors believe that FSO could be the ultimate solution for high-speed residential access. Instead of hybrid fiber-coax systems, hybrid fiber-laser systems may turn out to be the best way to deliver high data rates directly to the home

Notes:
TY - JOUR

URL:

Author Address:

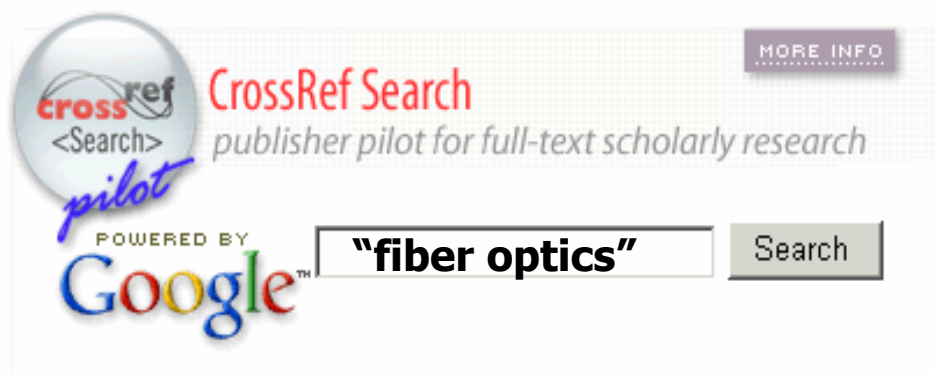
The publishers currently participating in the CrossRef Search Pilot are:

- American Institute of Physics
- American Physical Society
- American Society of Civil Engineers
- Annual Reviews
- Ashley Publications
- Association for Computing Machinery
- BioMed Central
- Blackwell Publishing
- BMJ Publishing Group
- Cambridge University Press
- Cold Spring Harbor Laboratory Press
- FASEB
- IEEE
- INFORMS
- Institute of Organic Chemistry and Biochemistry, Academy of Sciences of the Czech Republic
- Institute of Physics Publishing
- International Union of Crystallography

A group of leading publishers is participating in a CrossRef Search Pilot. Google has indexed the full text of scholarly documents on the publishers' websites through a CrossRef gateway. This effort focuses users' searches and reduces the noise produced by general web searches.

Use the CrossRef Search Pilot box below to locate content from participating publishers' sites, including IEEE. This new search is powered by Google using the articles's Digital Object Identifier (DOI) to link from the search results to the published article. Access to articles is determined by each publisher and your institution's subscriptions.

Note: For the most comprehensive search of IEEE content, please use the IEEE Xplore Author or Advanced search functions.



Please take a moment to tell us about your experience using the CrossRef Search by completing this [survey](#).

CrossRef เป็นการสืบค้นข้ามสำนักพิมพ์อื่นที่เป็นสมาชิกที่ร่วมในโครงการ
พิมพ์คำค้นและคลิกปุ่ม Search



CrossRef Search

publisher pilot for full-text scholarly research

MORE INFO

Fill in the CrossRef Search Pilot [Web Survey!](#)

Feedback: crs@crossref.org

Search

powered by
Google

Searched the web for "**fiber optics**".

Results **1 - 10** of about **21,200**. Search took **0.31** seconds.

Fiber optics DSPI for in situ diagnostics

... **Fiber optics** DSPI for in situ diagnostics. D Paoletti and G Schirripa Spagnolo

Dipartimento di Energetica, L'Aquila Univ., Italy ...

www.iop.org/EJ/abstract/0150-536X/24/1/002

[PDF] FIBER OPTICS DSPI FOR DIAGNOSTICS

File Format: PDF/Adobe Acrobat

... **Fiber optics**. Fibres optiques. Deformation analysis. Analyse. de. deformations.

InterfEmmólrrie ... has been shown earlier that **fiber optics** illumi- ...

www.iop.org/EJ/article/0150-536X/24/1/002/jo930102.pdf

[PDF] Fiber optic sensors for health monitoring of morphing airframes: I ...

File Format: PDF/Adobe Acrobat

... Without **fiber optics**. a. 152.6 ° 4.6. 17.1 ° 0.3. Without **fiber optics**. b.

209.2. 19.4. Room temperature 90. ?. flex. With **fiber optics** ...

www.iop.org/EJ/article/0964-1726/9/2/306/sm0206.pdf

คลิกเลือกรายการที่ต้องการ จากหน้าแสดงผลลัพท์ของ CrossRef Search

1,318,251 documents online

BROWSE

SEARCH

IEEE XPLORE GUIDE

SUPPORT

Welcome to IEEE Xplore

... delivering full text access to the world's highest quality technical literature in electrical engineering, computer science, and electronics.

Browse

- » [Journals & Magazines](#)
- » [Conference Proceedings](#)
- » [Standards](#)
- » [Books](#)

Basic Search

(All Fields)

- » [Advanced Search](#)
- » [Author Search](#)
- » [CrossRef Search](#)

Content Updates

Browse the latest update to see recently added content.

- » [Latest Content Update](#)

Top 100 Documents

Find out the most accessed documents for the month.

- » [View Top 100](#)

IEEE Peer Review

Publishing the highest quality technical literature

- » [Find out more](#)

Alerts

Register and access your tables of contents alerts.

- » [Visit Alerts](#)

Books

IEEE books are available for purchase from Wiley-IEEE Press and Wiley-IEEE Computer Society Press.

- » [Find out more](#)
- » [Browse Books](#)

IEEE Spectrum Magazine

Visit the Web site of IEEE's flagship magazine.



คลิก Visit Alerts

What's New @ IEEE
10 Free Newsletters
Subscribe Now >>

Stay on top of industry trends with a monthly What's New @ IEEE newsletter.

Sign up to receive regular email notification of recently posted journals and magazines. Each email contains a direct link to the latest issue's table of contents.

New Account

To set up a new email alert account, enter your name and email address below and click Submit.

Existing Account

If you have an existing email alert account and would like to modify your selection of titles, change your email address, or unsubscribe, enter your email address below and click Submit.

Name:

jirawat

Email address:

jirawat@book.co.th

Submit

Reset

1. ใส่ชื่อ

2. E-mail Address

3. คลิก Submit

Table of Contents Alerts

Manage your research quickly and efficiently with convenient Table of Contents Alerts. You will receive an email when a new journal or magazine issue in your area of interest has been posted online.

Tables of Contents Alerts are sent to varuttaya@book.co.th

Change your name and/or email address.

Name:

Email address:

Email Format

Text HTML

1

Table of Contents Alerts Set: 0

Alert Status	Title		Issues Per Year
<input type="checkbox"/>	Advanced Packaging, IEEE Transactions on [see also Components, Packaging and Manufacturing Technology, Part B: Advanced Packaging, IEEE Transactions on]	latest issue	4
<input type="checkbox"/>	Aerospace and Electronic Systems Magazine, IEEE	latest issue	12
<input type="checkbox"/>	Aerospace and Electronic Systems, IEEE Transactions on	latest issue	4

Select All Titles

Deselect All Titles

3

Unsubscribe

If you would like to unsubscribe from this service, click Unsubscribe.

4

1. เลือกรูปแบบไฟล์

2. คลิกที่ชื่อวารสารได้มากกว่า 1 ชื่อ

3. คลิก Submit Selection

4. หรือคลิกที่ Unsubscribe เพื่อยกเลิกบริการ Alert

