

Message from the IEEE Executive Director

James Prendergast
Region 8 Meeting
31th March 2012
Berlin, Germany



Business Highlights

Membership Growth Continues*

■ IEEE Total Membership: 426,772

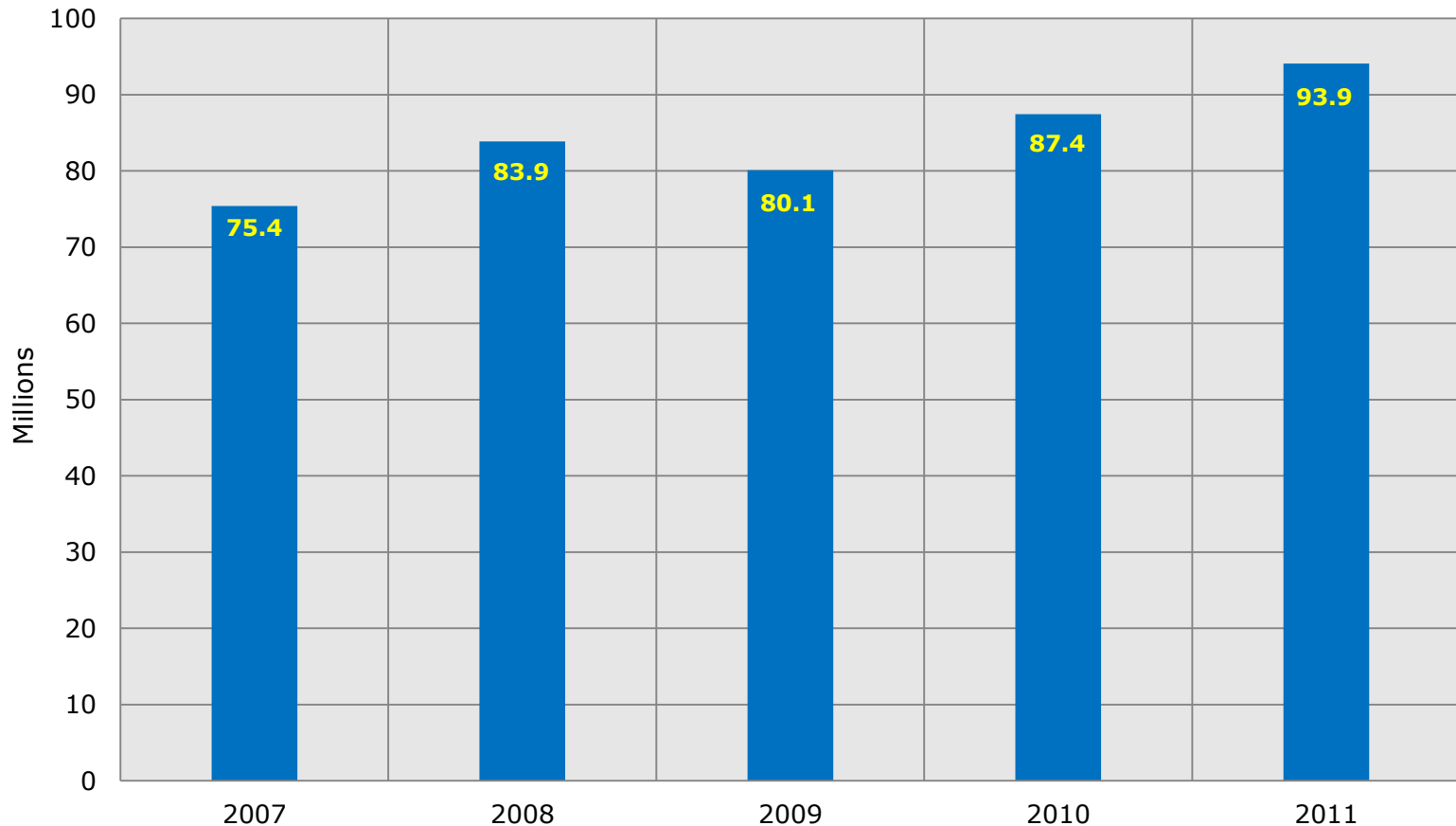
- Increased 2.1%: 8,889 members
- Higher Grade Membership, without GSM
 - Increased 1.1%: 3,291 members
- Students
 - Increased 9.1%: 6,115 members
- Graduate Students
 - Decreased -1.2%: -517 members

■ Society Membership Total: 331,384

- Increased 0.5%: 1,805 members

*all figures are through end of January 2012 and reflect the same time period [YoY] for 2011 unless otherwise noted;
all figures are also prior to the 29 February account deactivation

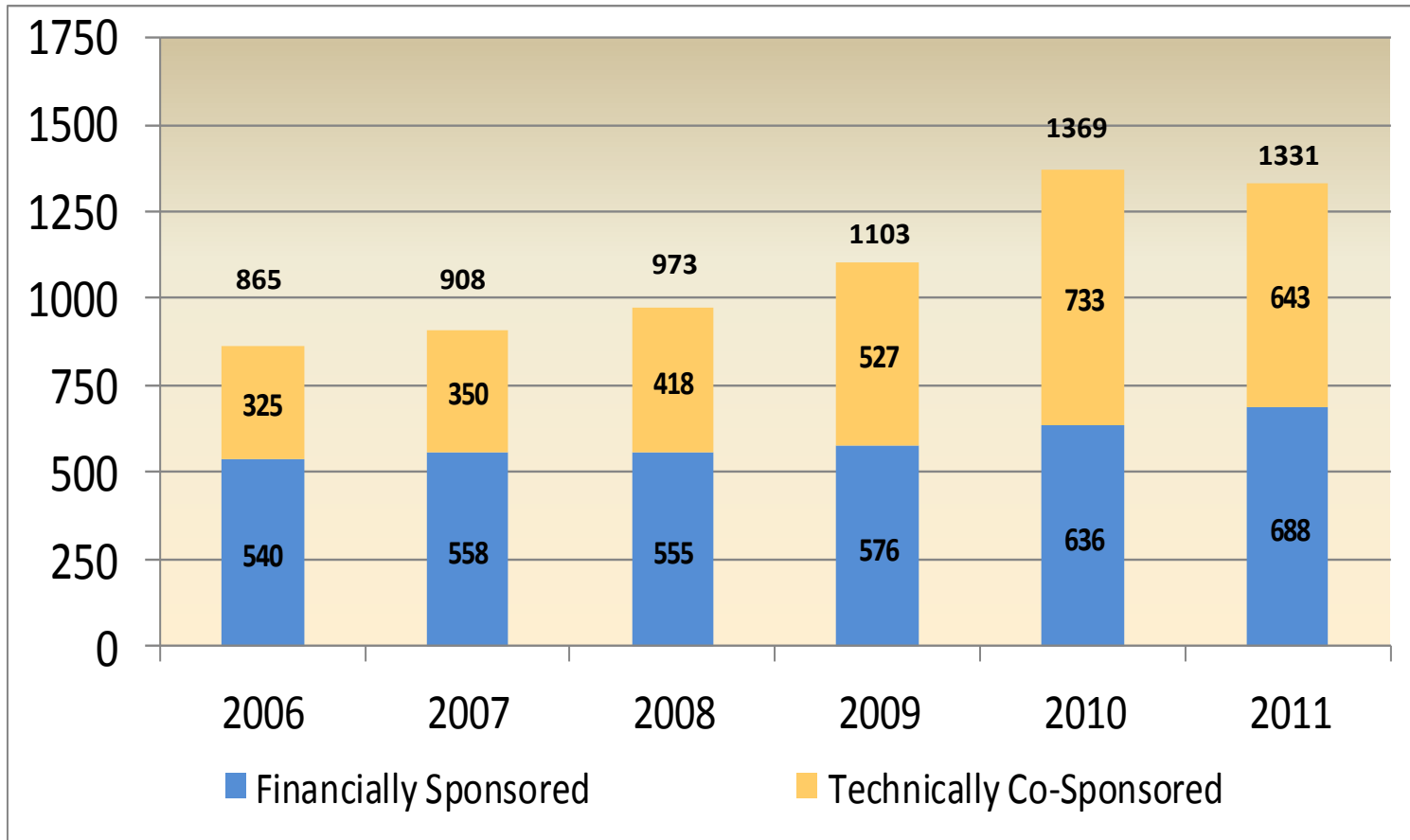
2011 *Xplore* Usage - A New High



Source: NetInsight Reports

Drop in 2009 was due to poor economic conditions and unexpected Google issue.

Total Number of IEEE Conferences



Data through 04 January 2012

Major Initiatives: Leveraging a Common Fabric

IEEE Business Platform (IBP)

IEEE Conference Exchange (ICX)

Integrated Content Project (ICP)

IBP, ICX, and ICP: In a Nutshell

- IBP: the IEEE Business Platform
 - a service-oriented architecture framework for delivering reusable components and applications for all of IEEE
 - *and*, the first set of those components delivering an excellent user experience for IEEE's eCommerce functions for membership and Xplore
- ICX: the IEEE Conference eXchange
 - a set of IBP-based components delivering functions for conference management including conference initiation, publications management, and a multitude of other conference tools
- ICP: the Interactive Content Project
 - the translation of IEEE intellectual property from PDF to XML to achieve (1) a standards-based format to better curate the IP, and (2) a representation of the IP that can be combined flexibly into a multitude of leveraged products

The Core IBP Promises

■ Intuitive User Experience

- User-centered design approach
- Simple, fast experience for purchases and membership activities
- Emphasis on usability & accessibility

■ Robust Technical Architecture

- A service-oriented architecture (SOA) that provides reusable enterprise services
- Leverages already built, validated and stabilized functions in use today
- Establishes an extensible platform for future growth and development

Key 2011–2012 IBP Milestones



Key IBP Membership Enhancements

- Significantly improved member experience
 - One page join and renew processes
 - Improved search and browse of membership, societies and subscriptions
 - Easy to change media options for membership subscriptions
 - More relevant recommendations
- Society-specific join
 - Shows the URL and logo of the referring society
 - Highlights society-specific publications
- Better experience for life members
 - Annual confirmation of services
 - Customized donation request

Key IBP Xplore® Enhancements

- Significantly improved IEEE account creation experience
 - User is no longer forced to leave Xplore to create account
 - Streamlined process
- Seamless discovery of purchasable information products
 - Leverages proven Xplore browse and search capabilities
 - Minimal disruption to existing institutional subscription users
 - Clear presentation of item descriptions, pricing, available media
- Integrated eCommerce functionality
 - Easy-to-find Add to Cart buttons
 - Dynamic mini-cart module (utilizing shared web service)
 - Seamless transition to enterprise shopping cart, checkout experience
 - Immediate access to purchased electronic documents
- Context and event-driven promotions and related items
 - Contextual display of related items for cross-sell/up-sell
 - Rules-based management of promotions

IBP Key Launch Messages

- Username for IEEE Accounts will change to user's preferred e-Mail address
 - Prompts at IBP applications during initial sign-in
 - Once changed, the e-Mail address will become the username for other applications using an IEEE account(web account)
 - Xplore® institutional subscribers will not be affected, unless they have a personal IEEE account
- Highlight new features and benefits for IEEE Members and Xplore customers

Deployment Downtime - Implications

29 March - 1 April

Customers/ Members	Impact	Action
IEEE <i>Xplore</i>	<ul style="list-style-type: none"> ▪ Users can search and read full text articles ▪ No single article sales or account creation access or updating 	<ul style="list-style-type: none"> ▪ Messaging on <i>Xplore</i> page
Join, Renew, Society Memberships, Product, Subscriptions Catalog	<ul style="list-style-type: none"> ▪ Unavailable; Members may leave email address for contact when system is available ▪ No online Join for Conferences 	<ul style="list-style-type: none"> ▪ Contact Center prepared for coverage ▪ Plan in place for providing service ▪ Conference Management informed
Add Services, myIEEE, memberNet, My Account, Account Services	<ul style="list-style-type: none"> ▪ Unavailable ▪ Contact Center may experience high volumes 	<ul style="list-style-type: none"> ▪ Same as above
OBIEE (Analytics/SAMIEE)	<ul style="list-style-type: none"> ▪ Current version 7.8 available until April 16; data from 28 Mar 	<ul style="list-style-type: none"> ▪ Advanced communication training for Volunteers and Employees

Analytics/SAMIEEE Deployment Plan

■ Pre Launch

- 28 March: data refresh
- 29 March to 15 April: Upgrade activities
 - Current version with 28 March data will be available
 - If volunteers transition username to e-mail, ‘My Folder’ will not be accessible until 16 April

■ Launch: 16 April

- Upgrade to new version, enhanced user interface
 - Training recommended, begins in April
 - ‘My Folder’ available/restored

Path Forward

■ Key Dates:

- Deployment: 29 March – 1 April
- IBP Launch: 1 April
- SAMIEEE Upgrade: 16 April
- Next Release: May
- Future Releases: August, December

■ Contact Center ready to support Members and Customers post launch

■ Communication to target audiences will continue

What is IEEE Conference Exchange (ICX)?

- A system that will provide the IEEE Conference Business:
 - An operations platform for managing the business
 - Built on IBP and is a flexible, scalable, integrated system
 - Will feed other internal systems with more conference information that is both timely and higher quality
- A system that will provide new services for IEEE Conference Organizers and OUs
 - Event-based services
 - Centralized services for small, medium and large conferences
 - Globally

Will serve the \$130+M IEEE Conference Business and its many stakeholders.

ICX Program Roadmap*

We are
here



2010

2012

**Phase 2:
Streamline and
optimize back-
end operations**

**Phase 3:
Enable new
services to
organizers and
OUs**

2013+

Jun

Oct

May

Oct

Dec

Jan

Project
Preparation

Conference Approval
with MOU
Management

Conference
Publications

**Phase 1: Stabilize the
conference business**

Tools and services for Conference
Organizers: Event Planning, Event
Management, Technical Program
Management as well as Service
Provider B2B integration capabilities

Refine new capabilities recently delivered; continue to
migrate conference systems inter-departmental information
feeds and reports onto ICX until Conference Database can be
retired (date TBD)

Why An “Exchange” for Conferences?

- To Provide Services to Conference Organizers and Efficiencies Across IEEE
 - **Frees up Conference Organizers** to focus on delivering exceptional conferences.
 - **Empowers Organizing Units** with visibility into all aspects of their conferences, providing portfolio perspectives and management capabilities critical to driving growth and success.
 - **Makes IEEE easy to do business with** making us the global premier resource for conferences

Keeping IEEE Competitive in Digital Publishing

- June 2011: PSPB and the IEEE Board approved a multi-year investment to keep our digital platform competitive in capabilities and content
- Key component: Interactive Content tagged in XML for all material – Journals, Magazines, Conferences, Standards, Books
 - Includes conversion of back file and development of tools to facilitate capturing tagged content from authors going forward
 - Also addition of plagiarism detection tool to ensure content quality

Interactive Content Project Achieves Initial Milestones

- Xplore® user interface design completed for Journals
 - Conference Proceedings User Interface in process
- XML Document Type Definition (DTD) for journals done
 - Updated (NISO Standard) Reference model completed
 - Conference Proceedings DTD 75% complete
- Xplore® Technical Operations preparing workflow and XML Repository
- XML/HTML content conversion underway
 - Journals XML conversion underway
 - Journals HTML conversion testing in process

Interactive Content Project Achieves Initial Milestones

- Work on Digital Production Tools underway
 - Development of Quality Control tools to support XML/HTML conversion started
 - Analysis of conference workflows/requirements began in Feb 2012
- Plagiarism detection tool being prepared for comprehensive roll out in 2012/2013
 - CrossCheck to be integrated within ScholarOne Manuscripts peer review system by 4Q 2012
 - Policy language for use of CrossCheck for all periodicals and conferences under discussion in Publication Services and Products Board (PSPB)

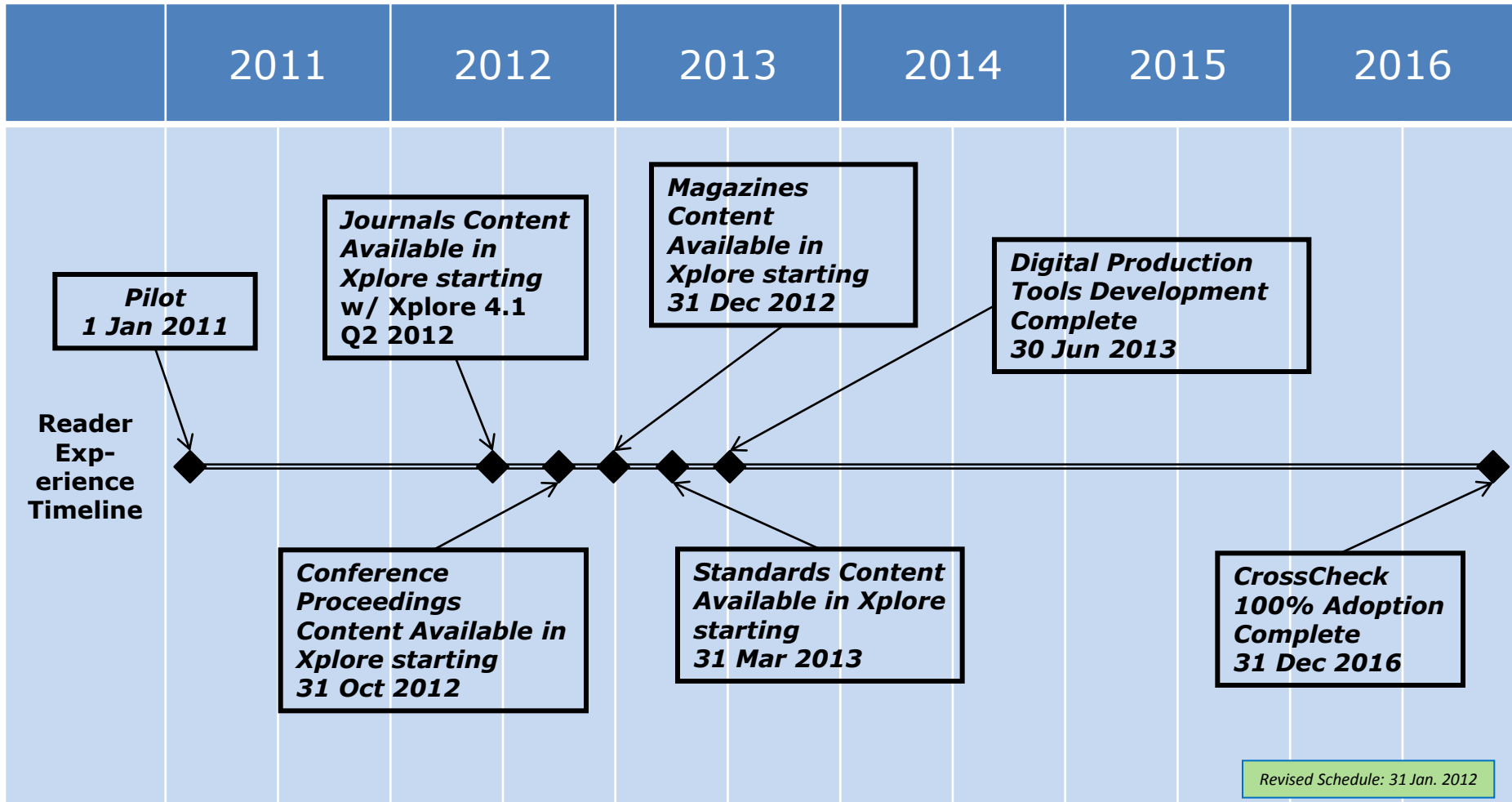
Experience With Project Results In Adjusted Schedule

- Decision made to give Xplore® Ver. 4.0 with IBP six weeks to ensure stability before adding new functions
- Interactive articles now scheduled for Xplore Ver. 4.1, due June 2012
 - Initially 3,000 of journal articles available – about 10% of original projection
- Delayed start of high volume conversion to
 - Facilitate HTML integration with IBP
 - Update & improve the User Interface
 - Use an article reference model consistent with NISO standards

Expected Progress by Year End 2012: What Will Users See?

- Journals: all content from 2001 – Q3 2012
 - Article Count: ~269,000
- Conference Proceedings: ~ 25% of the articles beginning with the most recent content
 - Article Count: ~546,000
- Magazines: ~ 50% of the articles beginning with the most recent content
 - Article Count: ~34,000
- Total Articles by Year-End 2012: ~849,000 or about 42% of total

ICP Overview: Work to Be Done in Stages Over 6 Years



Note: Project includes content from 2001 to Present

HTML-Formatted Samples Available via Xplore®

The screenshot displays the IEEE Xplore Digital Library interface. At the top, the IEEE Xplore logo is on the left, a search bar with a 'SEARCH' button is in the center, and the IEEE logo is on the right. Below the search bar, there are links for 'Advanced Search', 'Preferences', and 'Search Tips'. A navigation bar contains 'BROWSE', 'MY SETTINGS', 'CART', 'SIGN IN', 'Terms of Use', 'Feedback', and a 'Help' icon. On the left side, a 'PILOT JOURNALS' section lists: 'Proceedings of the IEEE', 'IEEE Magnetics Letters', 'IEEE Transactions on Robotics', 'IEEE Photonics Journal', 'IEEE Transactions on Visualization and Computer Graphics', and 'International Symposium on Circuits and Systems'. The main content area features a headline: 'The Next-generation IEEE Research Article is Here'. Below this, a paragraph states: 'We're excited to introduce a dynamic new design that will redefine how IEEE publications are displayed online. Beginning with our initial pilot launch, we will be presenting your favorite cutting-edge Xplore content in an elegant, state-of-the-art full-text HTML layout.' A sample article titled 'Quality-Optimized Authentication' is shown, including an abstract, authors (G. Sullivan, T. Wiegand), and a list of authors' keywords. To the right of the article is a profile for Qish Sun, Member, IEEE, with a photo and a brief biography. Below the article sample, text explains that with the full-text HTML design, users can: scan and interpret articles in under 60 seconds using 'At-A-Glance'; navigate between sections of long articles with intuitive floating navigation; effortlessly explore text, figures, equations and multimedia files; quickly view and copy mathematical equations, expressions and formulas; and enhance their research with 'Articles of Influence' leading recommendations. A note at the bottom states: 'NOTE: During our pilot phase, the definitive source for IEEE content will continue to be the full-text PDF articles.'

IEEE Xplore®
DIGITAL LIBRARY

SEARCH

Advanced Search | Preferences | Search Tips

BROWSE MY SETTINGS CART SIGN IN Terms of Use | Feedback | Help

PILOT JOURNALS

- Proceedings of the IEEE
- IEEE Magnetics Letters
- IEEE Transactions on Robotics
- IEEE Photonics Journal
- IEEE Transactions on Visualization and Computer Graphics
- International Symposium on Circuits and Systems

The Next-generation IEEE Research Article is Here

We're excited to introduce a dynamic new design that will redefine how IEEE publications are displayed online. Beginning with our initial pilot launch, we will be presenting your favorite cutting-edge Xplore content in an elegant, state-of-the-art full-text HTML layout.

Quality-Optimized Authentication

For secure reception from the authorized measures to minimize

The need for security services, multimedia communication has authentication cannot be direct access. This paper begins by reviewing stream-based and content-based multimedia security that exploit hashes and digital signatures for data security. However, related media, which is determined by the authenticated media is split based on their relative importance.

Authors Keywords

Media authentication, media security, stream authentication, streaming media authentication, video streaming

Authors

G. Sullivan, T. Wiegand
Proc. IEEE, p. 10-11, 2008

Qish Sun, Member, IEEE

Qish Sun (Member, IEEE) received his electrical engineering from the Science and Technology of China, Since 1996, he has been with the Infocomm Research, Singapore, a responsible for industrial as well as research projects in the area of real-time video analysis, etc. He was at University, New York, during 2000 Research Scientist. He is Head of Singapore for ISO/IEC JTC1 WG11, JTC1 WG11 authentication technology.

With the full-text HTML design you can:

- Scan and interpret articles in under 60 seconds using "At-A-Glance"
- Navigate between sections of long articles with intuitive floating navigation
- Effortlessly explore text, figures, equations and multimedia files
- Quickly view and copy mathematical equations, expressions and formulas
- Enhance your research with "Articles of Influence" leading recommendations

Explore the articles included in our pilot launch to learn first hand the many benefits our new design brings to the table. Please give us your feedback along the way; your input is important to us and we're excited to hear what you think.

NOTE: During our pilot phase, the definitive source for IEEE content will continue to be the full-text PDF articles.

Features Include:

The Quick Preview tab provides access to the **key metadata elements**. We'll offer **full text of the article in HTML** with a **scrolling navigation bar** that allows the user to identify their location and move through the article productively

The screenshot displays the IEEE Xplore 'Quick Preview' interface for the article 'Visual SLAM for Flying Vehicles'. The interface is divided into several sections:

- Top Navigation:** Includes a 'BROWSE' dropdown, 'Terms of Use', 'Feedback', and 'Help' links. Below this is a 'QUICK PREVIEW' header with tabs for 'Abstract', 'Keywords', 'Figures', 'Media', 'References', 'Cited By', and 'Authors'.
- Abstract Section:** Contains the title 'Visual SLAM for Flying Vehicles' and a summary paragraph: 'The ability to learn a map of the environment is important for numerous types of robotic vehicles. In this paper, we address the problem of learning a visual map of the ground using flying vehicles. We assume that the vehicles are equipped with one or two stereo-downlooking cameras in combination with an attitude sensor. Our approach is able to construct a visual map that can later on be used for navigation. Key advantages of our approach are that it is comparatively easy to implement, can robustly deal with noisy camera images, and can operate either with a monocular camera or a stereo camera system. Our technique uses visual features and estimates the correspondences between features using a variant of the progressive sample consensus (PROSAC) algorithm. This allows our approach to extract spatial constraints between camera poses that can then be used to address the simultaneous localization and mapping (SLAM) problem by applying graph methods. Furthermore, we address the problem of efficiently identifying loop closures. We performed several experiments with flying vehicles that demonstrate that our method is able to construct maps of large outdoor and indoor environments.'
- Metadata Section:** Located on the left, it provides details such as 'Issue Date: OCTOBER 2008', 'Page(s): 1088 - 1093', 'DOI: 10.1109/TRO.2008.2004952', and 'Date of Original Publication: 31 Sep. 2008'.
- Section I Introduction:** The main body of the article text, starting with 'The problem of learning maps with mobile robots is a large and active research field in the robotic community. In the past, a variety of solutions to the simultaneous localization and mapping (SLAM) problem have been developed that focus on learning 2-D maps. Additionally, several approaches for building 3-D maps have been proposed [8], [15], [21]. However, most of these methods rely on bulky sensors that have a high range and accuracy (e.g., SICK laser range finders) but cannot be used on robots such as small flying vehicles. As a result, several researchers focused on utilizing vision sensors instead of laser range finders. Cameras are an attractive alternative due to their limited weight and low power consumption. Many existing approaches that address the vision-based SLAM problem focus on scenarios in which a robot repeatedly observes a set of features [5], [7] and have been shown to learn accurate feature-based maps.'
- Right-Side Navigation:** A vertical bar of buttons allows users to navigate between different parts of the article: 'Quick Preview', 'Figures', 'Full Text', 'References', 'Authors', 'Cited By', 'Keywords', and 'Corrections'.

HTML-Formatted Articles will be Fully Integrated into the Production Version of IEEE Xplore®



View graphic images three at a time in the “Quick Preview”

Conclusion

IEEE's Professional Core:

We Are In The Knowledge Business

We empower people to **discover, develop** and **deliver technology for YOU...**

- We believe in collaboration and leveraging the **power of one IEEE**
- We strive for **excellence in everything we do**
- We align with **global trends**
- We aim for **simplicity**
- We focus for **maximum impact**

Our Five Year Aspiration

- **By 2016, IEEE will be the global provider of choice, and #1 in customer satisfaction, for services and products that empower people to discover, develop, and deliver technology.**
- **We will achieve this by...**
 - Delivering a best-in-class user experience by aggressively leveraging technologies
 - Increasing nimbleness, speed to market, and operational efficiencies
 - Driving high employee engagement and leadership excellence
 - Creating new opportunities for member and customer engagement
 - Ensuring our long term future through increased financial growth, strength & stability



*Advancing Technology
for Humanity*

