Membership Development Council

Alexander D. Gelman,
VP-Membership Development
AP RCCC, Beijing, August 28, 2004

http://www.comsoc.org
IEEE Communications Society
Membership Development Council

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• Zhisheng Niu, Beijing

ComSoc Staff:
John Pape – Director of Marketing
Carole Swaim – Membership Services
Fanny Su – AP Office

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Membership Development Council
Membership Stats as of July’2004 vs 2003

• Total IEEE membership 339,692, +1.2%
  • Institute Higher grades +0.1%
  • Students +7.1%
  • Total membership in US –1.4% & non-US +5.8% over-all +1.2%
• Total societies membership 348,806, -5.0%
  • Societies’ higher grades -4.8%
  • Students -0.6%
  • Society membership 348,806, -5.0%
• Total ComSoc membership 52,663, +2.1%
  • Higher grades -3,114 or -6.8%
  • Students +4,242 or +77.5%
  • Affiliates -56, or -14.6%

Highest growth:
• Geosciences and Remote Sensing +8.8%
• Social Implications of Technology +3.1%
• ComSoc +2.1%

Highest loss:
• CAS -18.0%
• Reliability – 15.5%
• Information Theory –11.5%

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Evolution of ComSoc constituency is due to proliferation of Communications and networking technologies and applications in new areas and also due to changes in Industry’s R&D culture.

Among positive factors for our industry are deregulation of spectrum and ubiquitous broadband government initiatives that lead to increase in funding of R&D in industry and academia. (5 GHz release, TV-band NPRM, BoPL FTTH unbundling relief, etc.)

Emerging Wireless and Wireline communications technologies Bring new players into the supplier and service communities:

Examples of technologies that expend the industry boudaries:

- Mesh Networks
- Sensor networks
- UWB
- TV Band Networking
- BoPL
- High Mobility Air I/F

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Comsoc and Intellectual Property Time-Line

IP Strength

Strong IP
Lo Hit Ratio
Area

Weak IP
Hi Hit Ratio
Area

Market

Conceptual
Research

Precompetitive
Research

Standardization
Development

Deployment

Time

WCNC/ICC/GL - 300
Workshops

Transactions
JSAC

Ind. Forums: IETF/OSGi/SDRF
OMA/ATSC/DSL/F/ATMF/etc.

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Evolution of R&D time-cycles

1984 R&D Cycle Scenario

<table>
<thead>
<tr>
<th>Conceptual Research</th>
<th>Technology Proving</th>
<th>TR/Specification by Industry Leader</th>
<th>Adoption of Spec by Standards body</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2</td>
<td>4</td>
<td>6</td>
</tr>
</tbody>
</table>

Pre-Competitive Research

IPR Positioning/Competitive Research

Highly Competitive Research

2004 R&D Cycle Scenario

<table>
<thead>
<tr>
<th>Conceptual Research</th>
<th>Technology Proving</th>
<th>Development</th>
<th>Certification/Compliance/Interop</th>
</tr>
</thead>
<tbody>
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</table>

Open Standards or Industry forum

IPR Positioning/Competitive Research

Highly Competitive Research

ComSoc’s service to the industry is to facilitate creation of the Intellectual property in relevant areas

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Intellectual Property Value Chain Evolution

*Root of the IPR*

**Before**

- Industrial Research Labs
- Academic Research

→

Telecom Industry’s Specification

**Now**

- Start-Ups Labs
- Academic Research

→

Under-served segment

Open Standards

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Consumer Communications and Networking
The Communications Scenario

[Diagram showing various networks and devices connected, such as Home Computing Network, Home Server, Home Entertainment Network, and Public Area Hot Spots.]
Power Utilities own access infrastructure to the mass consumer market.
Power Line Based Residential Networking
PLC-based Home Network: HomePlug

- No new wiring
- Rate v1.0 14 Mb/s
- Multi-tone, adaptive modulation
- Logical domain separation

http://www.homeplug.org
New Mass-Market Communications Industry segment is being born

BoPL Technology is in the stage of “competitive research” and exploratory development

http://www.comsoc.org
Facilitating Creation of a New BoPL Industry Segment

- BPL M&C
- IEEE-SA: Standard Co-sponsorship
- CommMag FT
- JSAC series
- Interaction with Industry Players (Utilities, EPRI, startups, etc)

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Value Proposition examples to Industry Segments

PLC
ComMag FT on Power Line Communications has been produced
JSAC Special Issue is in progress
PLC Subcommittee is being formed (Stefano Galli)

Consumer Communications and Networking
Inaugural conference CCNC’2004 took place in Las Vegas on January 5-8 in Conjunction with Consumer Electronics Show (CES), which draws 100,000 attendees

Next is CCNC’2005, General Chair - Nohisa Ohta. Please spread the word !!!!
http://www.ccnc.org

Standards
We are in discussion with IEEE-SA on BoPL standardization sponsorship
Sponsorship of standardization of next generation wireless, e.g. 802.20/22

Pre-standardization Industry Forums
ComSoc – WWRF cooperation wireless workshop, 10/2003, Technical co-sponsorship of WWRF meeting in Toronto

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Some Items to address

• Global nature of ComSoc and Industry and Regional Segregation:
  • Approach: Practice only GCCC

• Globalization of Society and US-centric services
  • Approach: Outsource support, proliferate benefits

• MD Programs and dealing with next year’s budgetary problems
  • GCCC’2005 has been cancelled due to budgetary problems

• New initiatives, e.g. certification (Pierre)

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Global cooperation is the key but we need to understand each other............
Thank You, participants of The AP RCCC’2004