Cracking the Collaboration Code

By Sanjiv Gossain
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Abstract:
Most businesses don’t collaborate very well at all. Most businesses allow supplies and other very limited online access to product information and other data.

Keywords:
Stovepipes

Executive Summary:
The Collaboration Ideal:
The dream is that the Internet makes everything move with synchronicity and precision. Of course, this is still a dream. For all of the talk about seamless technology-driven transaction, business still operates on creaky, fragmented infrastructure. The dream is not new, and nor are the challenges.

Web Struggles:
The tools available to improve collaboration were neither flexible nor open enough to impede old ways of working. The Internet was supposed to shatter these limitations. Yet, the Web has run into some of the same problems that bogged down client/server computing. Something else is needed. Firms are under tremendous pressure to salvage something from substantial recent e-business investments. There’s a secondary reason as well. Expectations are high.

Fortress Mentality:
Old ways die hard. Why have businesses grown up the way they have? What’s led to their fortress mentality?

Four Levels of Integration:
Precious few companies are tightly integrated with
their suppliers, customers, or business partners. There are four levels of external integration:

Level 1: Minimal integration. The majority of interactions involve sharing information through meetings, phone, fax, mail, and email.
Level 2: Moderate integration: Most interactions involve online viewing of information, but the parties have limited ability to change each other’s data.
Level 3: High integration: This includes automated transactions between the parties’ databases and software apps.
Level 4: Very high integration: The bulk of interactions involve tightly integrated databases and applications.

Effective collaboration does not require an all-or-nothing leap.

Busting Barriers:
There’s obviously terrific pressure to stick with business as is. With the Internet trimming costs, what now stands in the way? It is less about technical complexity than about organizational and cultural rigidities. The human barriers are huge: distrust and other reasons hurt collaboration. It is a fine line to use fear to energize innovation and leadership.

Success Factors:
Five lessons stand out from the experiences of the Level 4 Very high integration leaders. All of them are applicable regardless of industry sector or company size.

Focus on Business Areas with Strongest Potential Returns:
The business value of collaboration is compelling, with the highest returns emerging as the company’s focus moves closer to its core capabilities. A good place to start is to determine where the bulk of your business actually comes from, then augment internal integration to support those core customers.

Establish Executive Sponsorship:
The right senior manager will champion the programs and assemble the team that will boost the project’s chances for success. Most likely he or she will be a business leader who understands the collaboration concept.

Create a Business and Technology Blueprint:
As companies look to collaborate more broadly, it’s critical to have one shared definition of the interaction between them. A blueprint calls for an unusual blend of technology talent and business savvy.

Develop a Stakeholder Management Strategy Early On:

You must establish specific goals and benefits for each customer, supplier, and business partner involved.

Implement Projects in Short, Phased Initiatives:
Shareholders are looking for fast results, and business leaders are looking for rapid ROI. The days of lengthy projects are over. The businesses that collaborate most effectively, whether they are sharing point-of-sale data or jointly managing new projects, clearly outpace others in their industries.

In closing, it would be prudent for firms to strive towards being collaboration leaders.

Member Societies

IEEE Computer Society

ABOUT COMPUTER SOCIETY

IEEE Computer Society is the world’s leading organization of computing professionals. Founded in 1946, and the largest of IEEE’s 38 societies, the Computer Society is dedicated to advancing the theory and application of computing and information technology.

The Computer Society serves the information and career-development needs of today’s computing researchers and professionals with books, conferences, conference publications, magazines, online courses, software development certifications, standards, and technical journals. The redesigned www.computer.org offers a rich repository of online content and tools, from Computing Now, which provides free articles and multimedia content, to the Build Your Career career-development site, and the e-Learning Campus,
where members can access more than 3,000 online courses and 600 online books.

The Computer Society’s Certified Software Development Professional (CSPDP) program for mid-career professionals and Certified Software Development Associate (CSDA) credential for recent college graduates confirm the skill and knowledge of those working in the field. The Computer Society is also the producer of the Guide to the Software Engineering Body of Knowledge.

Known worldwide for its computer-standards activities, the Computer Society promotes an active exchange of ideas and technological innovation among members and technology companies producing today’s innovative products and services. It has relationships with 43 sister organizations arranged by the Intersociety Cooperation Committee.

The IEEE Computer Society Digital Library (CSDL) provides access to more than 330,000 articles and papers from more than 3,500 conference proceedings and 26 Computer Society periodicals. The Conference Publishing Services division produces more than 250 conference proceedings, CD-ROMs, and multimedia each year. CS Press publishes full-length technical books on cutting-edge topics through a partnership with John Wiley and Sons, as well as electronic products (ReadyNotes) and curated article collections (EssentialSets) under its own imprint.

With about 40 percent of its members living and working outside the United States, the Computer Society fosters international communication, cooperation, and information exchange. It monitors and evaluates curriculum accreditation guidelines through its ties with the US Computing Sciences Accreditation Board and the Accreditation Board for Engineering and Technology.

Based in Washington, DC, the Computer Society also operates an office in Los Alamitos, Calif.

Computer Society Chapters

Chapters offer the opportunity for Computer Society members in local areas to network with colleagues, develop activities for professional development, and share expertise through technical exchange. The Computer Society has over 375 chapters, national and international, professional and student.

The Computer Society offers a range of services to help chapter leaders and members create active, viable chapters:

The Distinguished Visitors Program
Awards and Scholarships
How to form a Chapter
How to form a Student Club
IEEE Member Get a Member

Computer Society Clubs

Computer Society Student Clubs are designed for institutions that do not meet the requirements for forming a student branch chapter. Clubs may not be formed at an institution where a student branch chapter or a Student Club already exists, but may be used as a precursor to forming a student branch chapter.

In order to form a Club at least one person (advisor or student) must be a Computer Society member. To form a Student Club, a one page petition is completed by the students and submitted to the Computer Society Vice President for Chapter Activities for approval. Once approved, the Student Club exists for one academic year. In order to continue as a Student Club, the students must resubmit a petition each year.

Publications

The IEEE Computer Society is a volunteer-led organization that serves today’s computing researchers and practitioners with peer-reviewed, technical journals, magazines, books, and conference publications, in addition to online courses, certification programs, conferences, career development services, and networking opportunities. Our publications are led and governed by the Publications Board, which includes operations committees for each of our publishing lines.

Magazines
Transactions
Computing Now
CS Press
Conference Publishing
Blogs
**News**

**2012 IEEE International Technology Management Conference**

Sponsored by the IEEE’s Technology Management Council, and co-sponsored by the IEEE Dallas Section, ITMC 2012 the premiere event for technology managers and executives. Addressing highly topical areas in 5 tracks, and with over 100 papers in 20 sessions, here's where managers come to learn about new approaches to innovation, sourcing, sustainability, managing change, and strategic and tactical solutions.

**Call for Papers**

Researchers, educators, managers and students are encouraged to submit papers. Contributions may be conceptual, theoretical or empirical and should document research activity, case studies or best practices, shedding light on the theory or practice of engineering, technology or innovation management. Papers should address the strategic objective of technological change. In addition to topics below (primary session tracks), this year’s conference will feature special sessions on university programs in systems engineering and management, and on financial engineering and macroeconomic modeling as they relate to management during times of business recovery.

**Spain Chapter**

TMC Spain Chapter has mainly focused in disseminating the key role of Technical Management in different scenarios, such as Public Administrations; Academia and Industry. This has been accomplished mainly by collaboration with other institutions and by participating in several workshops and symposia.

In this sense, several bilateral agreements have been successfully established. One of them with ATIS4ALL (www.atis4all.eu), a European Thematic network with the aim to facilitate global access to Assistive Technologies and Inclusive Solutions. Another agreement, currently underway is with the Association of Chartered Computer Engineers of Spain, which plays a key role in Computer System development and implementation. This agreement opens the path to the full span of Chartered Engineering Associations, in which TMC Spain will be devoted in order to have a global agreement with all of the professional engineers which are part of these Associations. This is a very promising activity, not only to gain visibility as TMC chapter, but also to gain deep insight and valuable feedback in the area of Technical Management.

The chapter has also participated in several dissemination activities in several conferences and workshops. The TMC Spain chapter has played an active role in the CNIS conference (II Congreso Nacional de Interoperabilidad y Seguridad), celebrated in February 2012 in Spain. The
conference, dealing with interoperability as well as security issues of complex system architectures, had the active collaboration of IEEE TMC Spain chapter, in the organization as well as in the participation as speakers within the conference.

TMC Spain chapter has also participated in a workshop devoted to Open Government organized by the Association of Chartered Telecommunication Engineers of Navarra, in Spain. The participation, with a presentation as well as actively in an industry/government round table was of great interest to the audience, with a strong presence of administrative institutions and bodies from several points of Spain.

In 2012 TMC Spain Chapter is getting further interaction inside IEEE Spain Section that open the way to interact better with other IEEE activities like; the National Student Branch meeting that will take place at the end of march 2012 in Barcelona, and the International Student Branch Conference that will take place in July 2012 in Madrid.

**Benelux Chapter**

Interesting news is that aside of our ITMC flagship conference in the US this year, there is also ICE 2012 in Germany where Bob Shapiro will be the incoming chair for the 2013 edition. This will then become a full IEEE conference. The website with details is [www.ice-conference.org](http://www.ice-conference.org).

During that conference there will also be an opportunity to have a TMC Chapter Chair meeting. So definitely news worthy.

Robert Bierwolf

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News from the BoG (Board of Governors)

TMC will focus this year on strategy, specifically on identifying and implementing activities that can help to generate revenue, since the Council is facing possible financial problems unless this can improve, on marketing to the member Societies, so that they will be aware of the value provided to them by TMC, and on building valuable content for the 5 portfolios which have been identified as of primary interest this year for TMC. The portfolios, and the BOG members responsible for each, are:

- Project Management  
  Celia Desmond
- Organizational Interfaces  
  Felix Lustenberger
- Innovation  
  Gus Gaynor
- Managing Technology Professionals  
  Tuna Tarim
- Strategic Technology Management  
  Wil Thissen

TMC is seeing a good number of downloads of published articles, which shows that there is interest in the areas covered. In the past over-length page charges have not been enforced. This will change now, but generally the accepted papers have not been over the page limit of 12 printed pages. EMR themes being considered for 2012 include:

- TMC is interested in working with Societies on conferences, including providing content for Society conferences.

Two breakout sessions were held to address possible actions for the future of TMC. One session addressed Strategy Planning, and the other discussed Chapter Relations.

Of course, if anyone in interested in helping up to communicate with our Chapters, please contact Celia Desmond, c.desmond@ieee.org. We’d love to have you working with us.

TMC Chapter News Editor
Osvaldo Perez
o.a.perez@ieee.org
Please contact me to include news from your Chapter
## TMC 2012 Officers

### Elected Officers

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
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<tbody>
<tr>
<td>President</td>
<td>Tuna Tarim</td>
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<tr>
<td>President-elect</td>
<td>Jennifer Q. Trelewicz</td>
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<tr>
<td>Past President</td>
<td>Luke Maki</td>
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<tr>
<td>Vice-President, Conferences</td>
<td>Robert Shapiro</td>
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<td>Vice-President, Publications</td>
<td>Gerard H. (Gus) Gaynor</td>
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<tr>
<td>Vice-President, Operations</td>
<td>Irving Engelson</td>
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### Appointed Officers ex-officio (non-voting)

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<tr>
<th>Position</th>
<th>Name</th>
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<tbody>
<tr>
<td>Treasurer</td>
<td>Dilip Kotak</td>
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<tr>
<td>Secretary</td>
<td>Luke Maki</td>
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### Society Representatives

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<tr>
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<tbody>
<tr>
<td>Broadcast Technology Society</td>
<td>Wayne Luplow</td>
</tr>
<tr>
<td>Circuits &amp; Systems Society</td>
<td>Felix Lustenberger</td>
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<tr>
<td>Communications Society</td>
<td>Celia Desmond</td>
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<tr>
<td>Computer Society</td>
<td>TBD</td>
</tr>
<tr>
<td>Electromagnetic Compatibility Society</td>
<td>Kimball Williams</td>
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<tr>
<td>Electron Devices Society</td>
<td>Ravi M. Todi</td>
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<tr>
<td>Industrial Electronics Society</td>
<td>Michael W. Condy</td>
</tr>
<tr>
<td>Photonics Society</td>
<td>John Marsh</td>
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<tr>
<td>Professional Communication Society</td>
<td>Julia Williams</td>
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<tr>
<td>Reliability Society</td>
<td>Samuel J. Keene</td>
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<tr>
<td>Signal Processing Society</td>
<td>Mazin Gilbert</td>
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<tr>
<td>Solid State Circuits Society</td>
<td>Mike Beunder</td>
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<tr>
<td>Systems Man and Cybernetics Society</td>
<td>Bill Gruver</td>
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<tr>
<td>Vehicular Technology Society</td>
<td>Don Hendrickson</td>
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### Division Directors:

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<thead>
<tr>
<th>Division</th>
<th>Director</th>
<th>Elect</th>
<th>Director-Elect</th>
<th>TMC Corresponding Members without vote:</th>
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<tbody>
<tr>
<td>VI</td>
<td>Jeffrey</td>
<td></td>
<td></td>
<td>Merrill W. Buckley, Jr.</td>
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<td></td>
<td>Bogdan</td>
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<td>Vivian A. Carr</td>
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<td></td>
<td>Mary</td>
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<td>Arthur Goldsmith</td>
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<td></td>
<td>Thomas H. Grim</td>
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<td>Charles Rubenstein (Liaison to IEEE Centre for Leadership Excellence)</td>
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### TMC Editors

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<tr>
<th>Journal</th>
<th>Editor</th>
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<tbody>
<tr>
<td>IEEE Engineering Management Review</td>
<td>Paul Bergey</td>
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<tr>
<td>IEEE Transactions on Engineering</td>
<td>Rajiv Sabherwal</td>
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### Committees

#### Standing Committees

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<th>Committee</th>
<th>Chair</th>
<th>Members</th>
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<tbody>
<tr>
<td>Awards</td>
<td>Samuel J Keene</td>
<td>Irv Engelson (VP - Operations) Felix Lustenberger</td>
</tr>
<tr>
<td>Budget, Finance</td>
<td>Jennifer Q. Trelewicz</td>
<td>Dilip Kotak</td>
</tr>
<tr>
<td>Chapters</td>
<td>Celia L. Desmond</td>
<td>Felix Engelson (VP – Operations) Liang Downey Osvaldo Perez John Reinert Mark Ciechanowski</td>
</tr>
<tr>
<td>Communications, Marketing</td>
<td>Felix Lustenberger</td>
<td>Luke Maki (Secretary) Jennifer Trelewicz (Webmaster)</td>
</tr>
<tr>
<td>Fellows</td>
<td>Irv Engelson</td>
<td>Irv Engelson (VP – Operations) Gus Gaynor Sam Keene Wade Shaw</td>
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<td>Governance</td>
<td>Tuna Tarim</td>
<td>Irv Engelson (VP - Operations)</td>
</tr>
<tr>
<td>Nominations</td>
<td>Luke Maki</td>
<td>Felix Lustenberger Sam Keene</td>
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<tr>
<td>Publications</td>
<td>Gus Gaynor</td>
<td>Rajiv Sabherwal Paul Bergey</td>
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Ad-hoc Committees

<table>
<thead>
<tr>
<th>Committee</th>
<th>Chair</th>
<th>Members</th>
</tr>
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<tbody>
<tr>
<td>Strategic Planning</td>
<td>Jennifer Q Trelewicz</td>
<td>Gus Gaynor, Irv Engelson, John Marsh, Felix Lustenberger, Don Hendrickson, Mike Beunder</td>
</tr>
<tr>
<td>Focus on MOT: Technical</td>
<td>Gus Gaynor</td>
<td>Tuna Tarim (Managing Technical Professionals), Gus Gaynor (Innovation), Strategic Wil Thissen (Technology Management), Felix Lustenberger (Organizational Interfaces), Celia Desmond (Project Management)</td>
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About IEEE Engineering Management Review

The Engineering Management Review, published since 1973, provides original articles, columnists, and reprints of articles from other publications related to the professional practice of engineering. Spanning a wide portfolio of topics in the management of engineering and technology, EMR provides its readers with the best articles drawn from the most highly regarded authors and journals.

Transactions on Engineering Management

Mission and Scope

IEEE Transactions on Engineering Management is dedicated to the publication of peer-reviewed original contributions of academic research regarding the theory and practice of engineering management. It is organized into seven departments: People and Organizations, R&D and Engineering Projects, Models and Methodologies, Information Technology, Manufacturing Systems, Technology & Innovation Management, and E-Commerce. The journal accepts five types of manuscripts: Strategic and Policy Issues, Research Articles, Technical Management Notes, Focus on Practice Papers, and Book Reviews. The intended audience is comprised of researchers, educators, graduate students and implementers of engineering and technology management concepts and theory in academia, industry, and government.

The purpose of the Transactions is multifold:

To assist in the establishment and recognition of the engineering management discipline, including management of technology and innovation

To provide a publications medium for authors at the leading edge of engineering management in academic institutions, industrial organizations, government agencies or other settings