

■ KENNETH E. KENDALL, Feature Editor, School of Business-Camden, Rutgers University

In this month's column, guest columnist Tony Clement looks at the phenomenon of social computing, how it became possible and then ubiquitous in places like Facebook and MySpace. Tony argues that human computer interaction is shaped by the platform (hardware and software) the user has available and walks us through generations of computers, then lists Tim O'Reilly's Web design patterns. He comments on the wisdom of crowd decisions facilitated by new technologies and concludes by optimistically stating that Web 2.0 has made it possible for the world to benefit from group decision making. [Kenneth E. Kendall, Feature Editor]

## Social Computing and the Potential Impact on Business Decision Making

by Tony Clement, CEO, Aegeon Corporation

One way to simply understand what the social computing era is, is to put a boundary around personal computing. What's your experience of PCs when they are NOT connected? Once the PC is disconnected from the Internet you're left with a personal computer that's great for personal productivity. PCs are excellent tools for creating documents, spreadsheets, presentations, databases, and even personal entertainment—that's personal computing.

But think of the limitations presented when you can't connect to a network and more specifically, the Internet. We connect now to research, share, communicate, interact, and collaborate for business and personal use. We connect to socialize. Social computing transcends the personal computer, extends to converged devices and is all about personal and business social interaction.

Social computing has changed the human-to-computer interface to human-to-computer-to-x-to-computer-to-human interface. Social computing takes us from the WHAT information provided by traditional (pre-social computing) applications—like what is the order number—to the WHY information—like why did that customer change their order. "WHAT" information tends to be formal and structured. "WHY" information tends to be informal and unstructured.

These informal interactions include ratings, reviews, comments, opinions, likes, dislikes—human experiences captured from user-generated content like tags, comments, wikis, and blogs—that forms the metadata upon which new notions of online credibility, authenticity, authority, and trust are being formed.

The ubiquity of the Internet combined with the social interaction of Web 2.0 has altered our views of information quality and credibility. We are no longer constrained to relying on traditional sources of information for news, viewpoints, commentary, etc. Today anyone who is connected to the Internet can freely blog their point of view on any topic, create encyclopedia articles in Wikipedia, launch a new community of interest on Facebook, or release new music on MySpace.

Computing platforms shape and determine how humans use computers, and computers have undoubtedly accelerated human social evolution. Continuous exponential improvement of computer processing power, scale, and usability, coupled with continually decreasing price points (Moore's Law and Metcalfe's Law) for technology and ubiquitous uptake and use of computers have forever changed the shape of human social interaction.



### Tony Clement

is the CEO of Aegeon Corporation. With over 24 years of international experience as an IT business professional, he has a proven track record of entrepreneurship, leadership, and innovation. He was a founder and managing director of e-Business Australia

Pty Ltd, an e-business and application service provider (ASP) from 1997-2001. He was an executive with the Australian Wheat Board Ltd (AWB) from 2001-2005 and held the positions of general manager, e-Business, head of IT Business Integration (for the \$850M Wesfarmers Landmark acquisition and the Hi-Fert Joint Venture with Elders Ltd), and IT strategy and architecture manager delivering a service-oriented architecture strategy and framework that significantly improved IT and business alignment. He then joined Sensis Pty Ltd as the IT group manager of strategy and transformation, where he implemented agile software development practices which again improved IT and business alignment and agility. He joined Aegeon in January 2007 and was appointed Australian president and VP of strategy and architecture in January 2008.

---

## HCI Is Dependent on Technology Platforms

Each era of human-computer interaction (HCI) has been underpinned by technology platforms (hardware and software) that determine how and why people process information with computers. In the 1960s computers were dominated by mainframe computers, mainframe operating systems, and mainframe programming languages. All of which were proprietary.

Mainframes centrally processed information (typically accounting related), providing businesses with more accurate and more efficient accounting-related process and information. People input data into mainframe computers, providing businesses with the ability to scale by processing transactions more accurately and efficiently.

In the 1970s mainframe computers were followed by mini-computers, which were basically the same as mainframes but were smaller and less expensive, expanding the use of computers to more organizations and to a larger market. Mini-computers are very similar to mainframes in hardware, software, architecture, and their proprietary nature.

Mini's were followed by personal computers in the 1980s, which opened up computer use to every business and eventually to every home. Personal computers are architecturally significantly different from mainframes and mini's. These differences are based on the PC basic design concept of personal use versus the mainframe and minicomputer basic design concept of multi-user and business (or organizational use).

In the 1990s computers were connected to the Internet and World Wide Web (Web 1.0). Suddenly anyone and everyone could publish and consume information effectively, efficiently, and in real time. Online commerce added transactions and some business processes. And at the end of the decade the dot.com boom (and bust) created new businesses and communications paradigms.

You will note that none of these computing platforms has disappeared but continue to be viable platforms for specific use. Google has made virtually

all of the information on the World Wide Web easily, instantaneously, and freely discoverable, opening up the limitless vistas of information to everyone.

We use information to make decisions. If information doesn't support a decision at some level, it shouldn't be called information. It's just data. In order for information to inform a decision it needs to be internalized, processed, contextualized, and actionable. Actionable information becomes knowledge.

## O'Reilly's Web 2.0 Design Patterns

The first half of the new millennium saw Web 1.0 consolidation and growth of successful Web companies like Google, Amazon, e-Bay, Yahoo!, and most recently, MySpace and Facebook. These companies have used eight (8) design patterns that Tim O'Reilly has defined as Web 2.0:

1. The long tail
2. Data is the next Intel inside
3. Users add value
4. Network effects by default
5. Some rights reserved
6. The perpetual beta
7. Cooperate, don't control
8. Software above the level of a single device

So, not only is computer use social, Web 2.0 systems incorporate social design patterns from inception. This is a significant departure from designing systems pre-Web 2.0.

The really cool thing is that humans are social creatures and, as we've seen from MySpace and Facebook, social computing platforms give us the ability to scale our social behavior. Now instead of the five friends that I used to stay in touch with, I can stay in touch with 50 or 500 or even 5,000 friends! And, they can be anywhere on the planet; as long as they have access to the Internet we can collaborate.

## Group (and Crowd) Decisions

In his book, *The Wisdom of Crowds*, James Surowiecki (2004) states, "[U]nder the right circumstances, groups are remarkably intelligent, and are often smarter than the smartest people in them. Groups do not need to be dominated by exceptionally intelligent people in order to be smart. Even if most of the people within the group are not especially well informed or rational, it can still reach a collectively wise decision." He goes on to state "the conditions necessary for the crowd to be wise: diversity, independence and a particular kind of decentralization."

He also focuses his book on three kinds of problems: cognition—problems that have or will have definitive solutions; coordination—problems that require members of a group to coordinate their behavior with each other, knowing that everyone else is trying to do the same; and cooperation—problems that involve the challenge of getting self-interested, distrustful people to work together, even when narrow self-interest would seem to dictate that no individual should take part.

Businesses face these types of problems every day and typically make decisions unilaterally, or by committee, or with some degree of consultation, but almost never by polling a crowd.

Interestingly, Surowiecki points out that the worst way to make a decision is the way most organizations make decisions today. That is, with teams that are bred in antithetical conditions to the ones necessary for the crowd to be wise. Many decision-making teams are not diverse—often they're homogenous, not independent—often they're completely interdependent, and not decentralized—often they're centralized.

Arguably, a significant contributor to the current global financial crisis has been caused by decision making of homogenous, interdependent, centralized, self-interested, executive teams which have globally devastated trust and confidence in formerly trusted financial institutional brands. In fact, diversity, independence, and decentralization, particularly the first two, are attributes that will cause

one to be rejected and ostracized in most organizations.

I find it very interesting that democratic society has faith in crowd decisions. Every democratic electoral process is based on crowd wisdom. We've just seen how Barack Obama used social networking and crowd-based "self-organization" to build the grass-roots support to make history to become the first African American president. We collectively trust that a majority vote will take nations in the "right" direction, and yet we run companies as if they were monarchies or dictatorships and treat employees as if they were a lower class of citizen. It's no wonder many workers are disenfranchised and just show up to punch a clock and collect a check.

### Web 2.0 and the Future

Web 2.0 technologies can begin to un-

leash and harness the wisdom of the crowd within large organizations and large communities. These technologies make it affordable to delegate decision making to a crowd in compliance with the framework described by Surwiecki (2004). By combining Web 2.0 technologies with a methodology for making certain types of decisions, businesses can improve their decision-making ability by taking advantage of the diversity, independence, and decentralization of their human assets.

Imagine the impact an open decision-making platform would have on honesty, integrity, competitiveness, innovation, customer satisfaction, employee satisfaction, brand, efficiency, effectiveness, productivity, research and development, marketing, etc. There isn't an area of business or government where improved transparency, communication,

and collaboration wouldn't improve the quality of decision making.

Widely exposing information to increase the levels of information socialization through Web 2.0 platforms may ultimately prove an important tool in ensuring that the decisions made by the few no longer diminish the quality of life of many.

### References

O'Reilly, T. (date unknown). Web 2.0 design patterns. Last accessed on May 24, 2009 at

<http://www.oreillynet.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-20.html?page=5>

Surowiecki, James. (2004). *The wisdom of crowds: Why the many are smarter than the few and how collective wisdom shapes business, economies, societies and nations*. Little, Brown. ■

---

## Decision Sciences Journal Moves into Top 25 of Management Journals

by Vicki Smith-Daniels, *Decision Sciences* Editor, Arizona State University

I am very pleased to share with you some exciting news about the *Decision Sciences* Journal. Recently, ISI announced the 2008 citation impact factors. *Decision Sciences* has experienced a significant improvement in its citation impact factor (62% annual increase) and moved to the top 25 Management journals in the ISI rankings. Comparatively speaking,

*Decision Sciences* has attained a new level of competitive ranking that places it with the very best OM and IS journals. Overall, *Decision Sciences* has experienced the second highest five-year impact factor increase: a 67% improvement compared to an average 31% impact improvement across peer journals. Please see the table below for details.

While there are many factors that impact a journal's reputation, ISI's rankings are widely recognized as an industry standard among business schools. Please share this good news with your colleagues and deans. This news provides hard evidence that all of the editorial team efforts to move the journal to the next level is paying off. ■

Journal	2008 Impact	2007 Impact	2004 Impact	5 Year % Increase
DS	2.318	1.435	.764	67%
JOM	2.420	1.851	1.955	19%
MS	2.354	1.931	1.934	18%
POM	1.933	2.123	.444	77%
ISR	2.261	2.602	3.512	-55%
MISQ	5.183	5.826	2.884	44%
JMIS	2.358	1.867	1.271	46%
M&SOM	1.214	-	-	-