

# Note on Contemporary Creative Challenges

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Some of the following article is based on a presentation by Giancarlo A. Mori given to the SoCal Breakfast group of the SoCal Institute of Management Consultants – Nov. 6th, 2009. The original presentation had a lot to do with the creativity required for complex computer game innovation, but further observations of this material have more general application to product innovation. In that sense this article is meant to be a review and follow up to that presentation and continues with some output from the new IMC Technology SIG.

In addition to music, games, the arts in general; creativity is becoming increasingly important in the development of new products. The Wikipedia definition of Creativity is:

*A mental and social process involving the generation of new ideas or concepts, or new associations of the creative mind between existing ideas or concepts-- Creativity is fueled by the process of either conscious or unconscious insight. An alternative conception of creativeness is that it is simply the act of making something new.*

Interactive Entertainment as gaming was the focus of the original presentation, but there are some business applications of the technology that could result in new products such as simulators, teaching workstations, and treatments for mental disorders and similar applications or problems. Gaming as a form of interactive entertainment is following a similar path to film and TV and has the ability to be a strong driver of future technical developments. The market driven gaming business is still strong, but it requires continuous and increasing creativity. Presently the gaming industry employs over 24,000 people in 31 states with a total compensation of over \$2B. Then direct and indirect related employment is approaching 100K people. This also includes many high-tech hardware developers. Growth is much more rapid (4X) than the total economy thereby illustrating the potential for the highly creative entertainment brought about with innovative hardware and software.

Typically the game development projects are quite large (average \$15M) and teams can be over 100 multidisciplinary people. A mix of new computer technology and creative software produce real-time results that is interactive and realistic. This field is becoming very competitive with lower margins, shorter development cycles, and many creative challenges. Here the challenges are more for creative and artistic ideas to make more people more active by using games and related programs. Our society is creating new anthropology and social systems via games and social networking that will require new skills and creativity. Creative talent will go to the best international opportunity. The US is no longer close to the

top employer with the highest percentage of creative talent. Other countries are spending a higher proportion of their GNP on R&D and are taking US talent. This affects all of the US product development. There is increased awareness of the need for extremely creative people. We must be offering adequate training to those with apparent creative talent and by rewarding the most creative. One needs to start with great talented leaders and people who can work together and bridge to markets. Great groups have to know the potential market, know the enemy, be focused and optimistic, and have adequate resources. Motivation can be internal satisfaction or tangible rewards, but there has to be a willingness to take risks to develop disruptive technologies. This is especially true in competitive R&D.

As an example, doing competitive R&D for product development, considerable creativity is required in order to obtain patents that exclude others from producing competitive products that could take away market share. With over 7million patents issued, the US has seen considerable creativity, but not all creative patents result in profitable products. Innovation is quickly becoming an international activity with significant international competition from very creative people. Now, with significant international competition, the competition for creative people and ideas is becoming more intense. Considerable resources are available by social networking, but one should not be limited to those readily available on the web. Other sources of personal networking involving personal contact are also helpful.

Orange County is becoming an emerging focal point for new startups, but the major sources of funding and startups are still in the Silicon Valley. A sample listing of potential networking resources from previous discussions of the Technology SIG of the Orange County Chapter of the Institute of Management Consultants provide potential resources for future creative challenges.

OCTANe—Startups thru mature companies, strong medical, some green, UCI connections, VCs, VC fund, resources for business, Angels, service providers, about 40 programs per year—good networking and resources

PDMA—Broad product development orientation, OC, SD, and LA groups—approximately 12 meetings per year per location—potential for good networking

AeA--Higher level electronic orientated companies, C level people attend, expensive) to join, could be good networking for specialized targets.

Tech Coast Angels—High end investment group with lots of contacts with startup companies, they sponsor and network with other groups such as OCTANe and the Harvard Alumni group which has an excellent conference each year with good networking possibilities and exposure to new startups.

Maverick Angels—SoCal investment group with lower requirements some early stage and startup companies—networking opportunities—two meetings w/o membership

Southern Cal Bio—Higher level life science and medical device group meeting in OC and LA involving more mature companies—specialized group, higher priced membership (\$500)

Caltech/MIT Enterprise Forums—Monthly meetings at Cal Tech on Saturdays involving startups, research, good presentations—good attendance and networking possibilities-- MIT group meets in SD—both have good value

Technology Council of Southern California-- A broad forum for the region's technology leaders, providing events, connections, information and resources to help technology companies succeed—membership is smaller than OCTANe, but there are many meetings in SoCal.

IEEE—Electronic Technology with good computer subsection, local meetings in SoCal and International conferences—technical networking opportunities

ASME—Technical mechanical engineering, wide variety of local, national, and international programs---some joint programs with UCI—may be good for very specialized targets

This listing is only a sampling from our Technology SIG. In addition to networking with these and related organizations, creative people can also be found at all the major universities in this area. Technology is being developed so rapidly that it is now necessary to take full advantage of available resources to meet rapidly changing markets. We need to focus on our clients' goals, visions, and potential markets to help them develop a creative means of developing competitive products and services. Open Innovation, Edison Innovation, Innovation Style Preference Indicator, simulation-driven product development, social product development, virtual think tanks, and other methodologies can be helpful. In addition there are a number of on-line technology development groups which can be very helpful. Even forming national teams of diversified organizations to creatively solve our biggest challenges could aid in the creation of new opportunities and business. Our future creative marketing will also need to adapt to new media and cultural expectations.