



# Shock and Awe

In my first published BackTalk article [1], I proposed that software engineers should, like other professionals, have one ultimate goal or measure that directs, motivates, and defines their success. I referred to this as the “measure that eclipses all others” or “the acid test.” All other measures and tests are fruitless if you don’t pass the acid test. I proposed, and still propose, that the acid test for software engineers is customer satisfaction.

While many struggle to define customer satisfaction, in the defense industry it’s clear that our customers are warriors, and they are satisfied when we enhance their ability to accomplish a mission. At the time of that article, our mission was in the Balkans; yet while successful, there was definitely room for improvement.

Four years later a new acid test is being applied between the Euphrates and Tigris rivers. As I write, the liberation of Iraq is two weeks old and far from complete, but the early test scores are looking very promising. The use of technology and the ability of our troops to accomplish their missions with lightning speed and pinpoint accuracy are truly impressive.

The strategy in the current campaign has been coined as *shock and awe*. The term has left many from the drive-thru generation in disappointment. Like a spoiled child on the 4<sup>th</sup> of July, members of the media and their armchair generals have complained because the fireworks are not big enough to shock or awe.

Those of us that work in the defense industry have a different view of shock and awe. The shock for me is how far we have come from Desert Storm in terms of accuracy, communication, and flexibility. While we all have seen certain systems in test and training, this is the first time we have seen all those components come together in the fog of war. The awe is in the execution and results.

The complexity of the conflict increased as the oppressors scattered like cockroaches among the innocent. Stop and think of the complexity and challenge of removing them with minimal harm to civilians and infrastructure. One would not even contemplate such a mission without the technologies engineers have nurtured to maturity.

But, before we dislocate our shoulders patting ourselves on the back, we should assess how we can do better in the future. The following are suggested follow-up engineering campaigns.

## Gawk and Jaw

This is a campaign to look closely (gawk) at your system’s performance and thrash out (jaw) with colleagues and customers what worked and what didn’t work.

## Knock and Flaw

This is a campaign to kick around (knock) your systems and wheedle out their shortcomings (flaws). This is an effort to avert overconfidence and remove impediments to future customer satisfaction.

## Rock and Moi

This is a campaign to disrupt (rock) your mental equilibrium (moi). Look within yourself for new thoughts, ideas, and inspiration.

## Stock and Draw

This is a campaign to explore your current supply (stock) of

technologies and extract (draw), the most promising for new applications.

## Flock and Yaw

This is a campaign to work together (flock), focus on our customer’s course of action, and work to minimize deviation (yaw) from that course.

## Wok and Gnaw

This is a campaign to collect and simmer (wok) assorted technologies, integrate them, and let customers chew (gnaw) on them to make sure they satisfy their appetite.

## Walk and Ohm’s Law

This meta-campaign is for engineers to stride (walk), towards the maximum flow of technology (Ohm’s Law) to customers. George Simonga Ohm postulated that an electrical current is directly proportional to the potential difference and indirectly proportional to resistance [2]; to maximize the flow of current, increase potential, and decrease resistance. Applying Ohm’s Law to technology transfer in this campaign is to maximize the steady flow of technology by increasing mental potential and decreasing emotional resistance.

Before we get caught up in the technology, let us not forget our customer: young soldiers, marines, seamen, and pilots executing their missions with courage, resolve, fidelity, and compassion. Whether you are for or against this action, appreciation for the troops and their sacrifice is well earned. I worked with and for them, and I’m greatly indebted to and proud of these heroes. I hope and pray that they quickly return from harm’s way. The only shock and awe these young men and women should have to deliver in the future is on their ma and pa.

Filling the role of enforcer is never easy or popular but necessary. As Lee Harris puts it:

... if any social order is to achieve stability there must be, at the heart of it, a double standard governing the use of violence and force. There must be one agent who is permitted to use force against other agents who are not permitted to use force. [3]

I sense the fashionable stance that peace can be achieved without violence is fading. Governing in an age of chemical, biological, and nuclear weapons differs greatly from the age of guns, knives, and clubs. Therefore, I hope most of all that we are always prepared for the next acid test.

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## References

1. Petersen, G. “The Acid Test: Measuring Your Success.” *CrossTalk* June 1999: 31.
2. Merriam-Webster Online Dictionary. Copyright 2003 by Merriam-Webster, Incorporated <www.m-w.com>.
3. Harris, Lee. “Our World Historical Gamble.” Tech Central Station. Online posting. 11 Mar. 2003 <www.techcentralstation.com/1051/defensewrapper.jsp?PID=1051-350&CID=1051-031103A>.