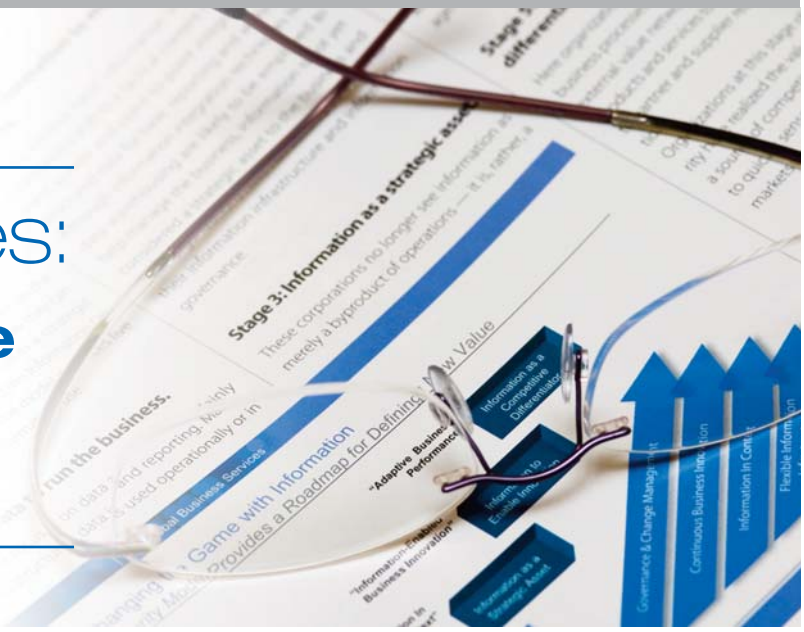

Technical articles:

a fresh look at the familiar 'problem/ solution' formula

The first lesson every trainee journalist learns is that the role of newspapers and magazines is to both inform and entertain. Produce information without entertaining your reader, and you are writing a textbook. If you entertain your reader but give them no information, you are in showbiz.

In our industry of electronics, a mainstay of magazine journalism is the technical article contributed by a supplier or other expert. So does this rule – 'inform and entertain' – apply to technical article contributions too? Is an engineer or product marketer at a component manufacturer meant to meet the same editorial standard as a full-time, professional journalist?

The answer is most certainly yes: just like any other editorial content, a technical article should both inform and entertain. And magazine and online publishers are hungry for contributed articles that pass this test.

So this raises a big question: how do you get engineers to write articles that are interesting to read, as well as offer valuable technical guidance? At first sight, it appears difficult: as a breed, engineers are not instinctive communicators. They live in a precise, measured world where facts and numbers are more important than impressions or feelings. The idea that you might entertain someone with facts and figures seems strange. And you are unlikely to be able to turn a semiconductor product marketer into Jim Carrey or Beyonce!

Let's be clear, then, about what a journalist means when they say their job is to inform and entertain. To a journalist at an electronics publication, 'information' is something that a reader does not already know, and that in some important way affects them professionally.

And to explain what a journalist means by entertaining, it might help to think of the headlines that you read on the front page of the daily newspaper, or the opening seconds of the television news bulletins. The effect is of drama or shock: the crisis engulfing a government or the last-ditch rescue from what seemed to be certain death. To keep us glued to the TV or sustain the habit of buying a newspaper, journalists play on our craving for information that surprises and shocks, frightens or reassures us.

Clearly, technical articles are not matters of life and death; but a good technical article also deals in strong emotions.

Creating emotion from engineering

As we said above, engineers are typically not natural communicators. They are, though, natural problem-solvers, and it is through the uncovering and solution of problems that their articles will deliver an emotional punch.

Of course, the formula of stating an engineering problem, describing various potential solutions to this problem before showing how the vendor's own solution best solves the problem is familiar and well-worn. But article-writers who blindly follow this formula will find their articles frequently rejected by editors. Without the magic emotional ingredient, their article might find a home in a text-book, but not in a magazine.

Article-writers must learn to deal in the currency of curiosity. They must spark a reader's curiosity by uncovering an engineering problem, possibility or insight that is unexpected, counter-intuitive, even shocking. It is the evocation of curiosity, even of suspended disbelief, in the reader that gives a technical article its emotional punch.

More...

Perhaps it is best illustrated through an example:

'LED lighting systems today contain two main blocks: a high-power block that drives power LEDs at high current to produce a bright light output; and a low-power block that contains the controller circuitry to provide functions such as dimming, temperature monitoring and so on. Unfortunately, the existence of two blocks of circuitry leads to a high component count, high BOM cost and high assembly costs.
Engineers have made little headway in attempts to reduce the number of components in LED lighting because of the need to physically separate the high-voltage elements of the system from the sensitive controller circuitry'.

At this point, the engineer's curiosity has been aroused, because the writer has highlighted a big and intractable problem. It is an accepted fact in electronics design that high-voltage and low-voltage circuits do not co-exist happily. Surely the writer is not going to go against years of received wisdom?

'Now a newly introduced embedded power controller allows the circuit designer to provide constant-current driving capability up to 1A together with sophisticated lighting control functions in a single device. By integrating the power and control functions in one chip, the system designer is able to reduce component count and BOM cost, and design a smaller board that is easier to assemble.'

Now, the article is able to deliver on the rest of its emotional promise to the reader: satisfying the curiosity it has evoked. The article's job is now to describe the solution, and to answer all the questions the curious reader will be thinking of: in what circumstances does this solution work? Is it universal, for all LED lighting systems? How much control does it provide? Is its power capability sufficient to drive all power LEDs? In other words, is it **really** a solution to the big and intractable problem it said it addressed?

A new formula for technical writing

Today, the familiar formula that technical writers are encouraged to follow is to state an engineering problem, and then describe how the vendor's product solves this problem.

As we have seen, this inadequately describes the task the technical writer is required to perform. Following this formula will lead to a disappointingly high rejection rate.

Instead, technical writers should be encouraged to follow a different formula: first, spark the curiosity of your engineer-readers; then completely satisfy the curiosity you have unleashed. The more passionate the curiosity you provoke, the more shocking or unexpected the problem you describe, the more readers you will attract and the longer your message will live in the reader's memory.

How to get engineers to write

We have described above a formula for generating the idea for an article, and its subject headings. But how do you get an engineer to write 1,500 high-quality words about the idea?

In fact, this is a secondary problem. Some engineers can write 1,500 perfect words, well structured and powerfully expressed. But they are few and far between.

Almost every engineer, however, can have an idea that will provoke curiosity, and describe the solution or insight that satisfies that curiosity. The words used might be awkward, the sentences might not flow from one to the next, and the structure might not make for a coherent, logical whole. In this case, a company with expertise in technical writing, such as TKO Marketing Consultants, can turn the engineer's original into publishable copy.

But your engineers best understand your customers' problems, attitudes, assumptions, beliefs and prejudices – and how your company's products can overturn them. They have the fuel to set alight your customers' curiosity, and that curiosity is the source of success with technical articles.

TKO Marketing Consultants is responsible for writing, editing or placing technical articles in Europe for clients including Cypress Semiconductor, Future Electronics, austriamicrosystems, RadiSys and others.

If you would like to find out how we could help you with your technical article programme, please call Tim Weekes on +44 1444 473555 or e-mail tim@tko.co.uk.

TKO Marketing Consultants Ltd
4 Lucastes Mews
Paddockhall Road
Haywards Heath
West Sussex RH16 1HE, UK