How to detect and cover weak signals – Anders Frick

Abstract for panel discussion at the fourth Innovation Journalism Conference at Stanford University, May 21-23, 2007.

People have always wanted to be able to predict the future, and those who can are generally successful, and not only in business. For us journalists, finding and correctly interpreting the weak signals of an upcoming trend can lead to stories that no other journalist had even been thinking of.

What appears to a journalist as a weak signal may seem rather stronger to the experts who spend their lives preparing to receive it. Therefore, it is critically important that a journalist use such experts as "antennas," mainly by networking with them and winning their trust. For journalists who write mainly about innovations, close contact with academic research – in terms of following and coverage – is also a good idea.

Nanotech – a case study

Despite the great potential of nanotechnology, or maybe because of it, the field appears to face great difficulties in the near term, at least in Sweden.

A recent report on nanotechnology by Vinnova, The Swedish Governmental Agency for Innovation Systems, concluded that nanotech had been hyped and that the gap between researchers and companies was too wide. This is why venture capitalists have hesitated to invest in the field.

Quick facts about weak signals:

- Weak signals is the first signs or hints of a coming change
- Three good tools for a journalist to find weak signals are:
  - Networking
  - Understand your beat
  - Trust
- Passion for the subject and being close to academic research is also very helpful

This report is mainly based on:

- A panel discussion about "Getting the story: How to break news ahead of the competition", held at Associated Press on March 28, 2007
- E-mail survey among editors at IEEE Spectrum, performed in the beginning of April 2007
- Interview with Turo Uskali, who is a researcher within this area

Panel participants:

- Tekla S. Perry, Senior Editor of IEEE Spectrum
- Turo Uskali, Innovation Journalism Researcher at Stanford University

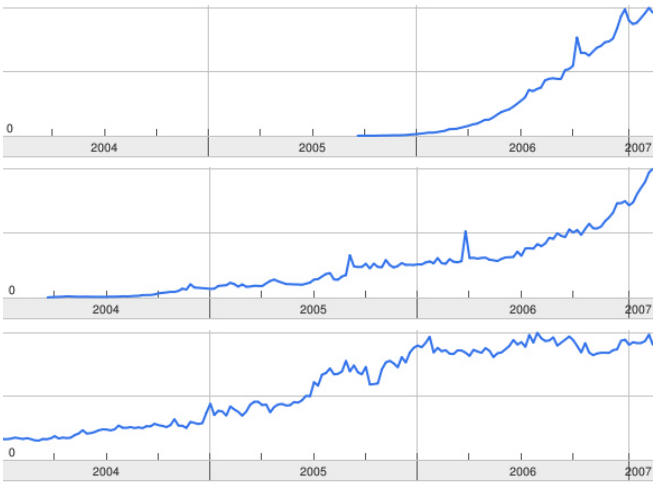
Nanotechnology will probably be big in the future, and it is a typical area where several different weak signals can be found. The question is how to identify and interpret them.

How to find the signals

A big part of a journalist's job is making hard things understandable. In an area such as nanotechnology, it is quite obvious that journalists writing about complex ideas and models need academic researchers help in making them understandable.

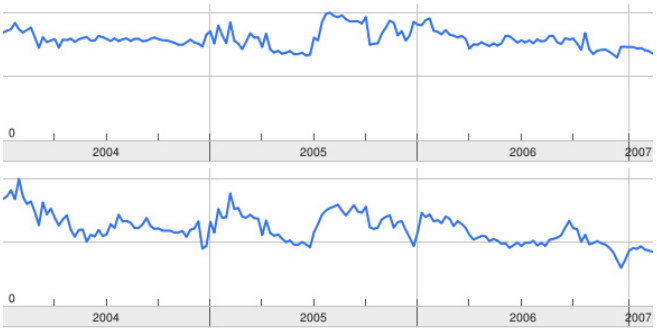
Trend finding online

Is it possible to detect potential weak signals via Internet? Consider the following graphs, from Google Trends, showing how often certain words are searched:



- ’youtube’
- ’facebook’
- ’blog’

Figure above: Google Trends for the search terms “youtube,” “facebook,” and “blog,” respectively.



- ’internet’
- ’nanotechnology’

Figure above: Google Trends for “internet” and “nanotechnology,” respectively.

We can see that search terms that are relatively *new*, such as Youtube, Facebook and blog, grow, sometimes at an accelerating rate.

But to be able to see the weak signals in all the other noise is very hard. And once the curve becomes noticeable, it is not a weak signal any more…. Clues from the Internet don’t seem to be enough.

Looking at the other example, the search trend for “nanotechnology” follows almost the same curve as that for “internet”.

If we assume that people search for the word “internet” quite independently of other trends, then we should consider the curve for the search term “internet” as normal. If the number of hits were divided by number of searches, and plot it, the curve would probably be almost flat. One solution might be to instead search for a sub-term, but from what we can see here in general is that it is hard to find the weak signals about nanotechnology by analyzing this kind of public data.

With this in mind, it seems that finding weak signals requires the same kind of work that a journalist performs when doing any kind of reporting:

- Networking
- Understanding your beat
- Winning the source's trust

Networking

Networking in this case means basically talking to and interacting with people. Paul Davies, a staff reporter at *The Wall Street Journal*, claims to call lawyers for an hour every morning: "I keep contact with many people, and I have actually made a front-page story by getting information from people that I got to know ten years ago."

Every journalist should have a thick address book and have contacts with people with expertise knowledge in different areas. This is even more important for a journalist who is interested in innovations, and when writing about things that cross the boundaries separating traditional beats.

While networking one must take care not to get too close to your source. Otherwise, to whom will you owe your loyalty - the reader or the source? "I always buy my own coffee and keep people at arm's length. I actually also want them to be a little bit afraid of me," says Davies.

Understanding

Another place to find stories is in the footnotes. "Footnotes are magic", says Elisabeth MacDonald, a senior editor at *Forbes*. "They tell you a lot, especially in dry boring reports. If you stay with your beat, as I did for nine years, you will find gold in there. The key to understand the boring things is very often to read the foot notes."

"In order to predict the future, you must first know the past, and then interpret the present," says Turo Uskali, an Innovation Journalism researcher at Stanford University. He believes that a journalist's experience can predispose him to make errors, saying that those who specialize in economics, for instance, are more likely to be wrong when predicting negative events, perhaps because they are so used to reporting positive news.

Trust

Having sources is the first step; then you must get them to trust you. "I usually go to people at an early stage – before writing anything. In one case, I got a CD with about 2000 [classified] documents sent to me after three months of interaction with a source," says Davis.

In an area such as nanotechnology, the timeframe is quite long – nothing happens overnight. Therefore, the possibility to create trust from sources is probably easier here than in other areas.

Passion for the subject

One way of improving your chances of catching the next big trend is by accepting assignments that other reporters turn down. Philip Ross, a senior editor at *IEEE Spectrum*, remembers doing so in the late 1980s - in order to get his first magazine job, at *Scientific American*. "They gave me the test of editing an article that had been sitting around because none of the editors had liked it, and of course, I did my best to make it interesting," he says. "As a result, the test not only got me the job, it also got the article into print. It was on

nanotechnology. A few years later, the field got hot, and for a while my experience put me way ahead of the competition."

Ross became interested in the subject, which is a good start. Another editor at Spectrum explains that transforming the interest into passion is even better, in terms of covering the subject. This especially seems to be useful for journalists in the beginning of the career:

"I've noticed that oftentimes journalists get their biggest story ever when they're just starting out. I have no idea why that is, but I suspect that some combination of hunger, ambition, and beginner's luck is involved. I suspect you see the same pattern in many fields, including science itself", the editor says.

How to interpret weak signals

It isn't enough to detect a signal - you also have to know how to interpret them.

Many journalists make qualified guesses. In the rare cases when a guess turns out to be correct, the journalist may cite the old article as "proof" of a good sense for the future. In fact, such exercise merely shows that he who shoots many arrows will sometimes hit a target.

To improve the odds takes knowledge, which can best be gotten in three ways:

- Share information (with colleagues and in other constellations) – one plus one is often more than two
- Ask the experts – don't be afraid of asking "stupid" questions
- Interact with your readers – combining data from several sources can close the circle

Risks: Make and fake

Fierce competition sometimes tempts futurists to take ethical shortcuts. A few journalists have gone so far as to make up their own news. That also happens in science, but probably not as often as in journalism.

In science, the number of produced texts are fewer, but even more important is that a result cannot be accepted without corroboration, usually in the form of a repetition of an experiment by an independent researcher. This process of validation is the heart of the scientific method, and it assures that incorrect or even fraudulent research will, in the long run, be thrown out.

That is probably why sensational news is so rare in science. Nothing is new under the sun. "A professor is rarely surprised when he reads an article in *Nature,* for example, about something within his field of expertise," says Samuel K. Moore, a senior editor at *IEEE Spectrum*.

One of Moore's focus areas is nanotechnology, and his trick to stay ahead of other magazine's nanotech editors is: "You visit conferences and you talk to people. It's all about talking."

He also says that many of the latest discoveries take around three to five years before they can turn into something useful. This is especially true for nanotech, because it is relatively new area.

Critics of the work

In this article, we talked about that seeing weak signals might be done in a similar way as finding breaking news, even though the lifecycle of scoop findings usually is shorter. Ross, however, disagrees with this approach.

"I would distinguish getting a scoop from being the first to notice a trend. A scoop generally comes from finding things that other people have deliberately hidden; noticing a trend requires seeing the future before others do. Here, even expertise in a subject offers no advantage; it may even constitute a disadvantage."

Conclusion

This article tried to explain what the concept of weak signals is, how to find them and how to interpret them. To wrap up, here are some advices from a panel discussion about how to see weak signals and break news ahead of others, held at Associated Press in March 2007:

Brian Toolan, Associated Press:

- Have passion for the subject
- Make 100 phone calls every week
- Beg [for information], and you will get it

Elizabeth MacDonald, Forbes Magazine:

- The footnotes are magic
- Catch flies with honey [=you have to offer something to get something]
- Stay with the beat
- Do the boring reading – it will payoff
- Get the sources to trust you

Paul Davies, Wall Street Journal:

- Everyone I meet is a potential source
- "Call the lawyers for one hour every morning"
- Read the provincial newspapers
- Keep in touch with people
- Pay for your own coffee
- Keep people on arm's length and let them be a little afraid of you

Murray Weiss, New York Post:

- Have the ability to make another call
- Get to know people, and have lot's of lunches with them
- Get a specific beat
- Think beyond the obvious
- Work with the things you are interested in
- Be objective in your work
- Do not use e-mail. Have meetings instead.

Frank Ucciardo, CBS News:

- Hang around and get the feeling for what's up
- Get the sources to trust you
- Do your homework
- Take your time
- Shut up and listen [to the interviewee]

Further readings:

Two reports by Turo Uskali, about weak signals:
http://www.helsinki.fi/iehc2006/papers1/Ojala.pdf
http://www.innovationjournalism.org/archive/INJO-2-11.pdf

Report from Vinnova about "Nanoteknikens innovationssystem":
http://www.vinnova.se/upload/EPiStorePDF/va-07-01.pdf