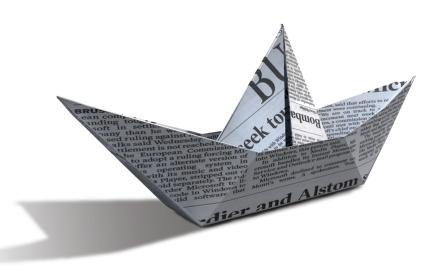# How to Write a News Story

1. The Five 'W's (and the 'H')

This is the crux of all news. You need to know these things:

Who? What? Where? When? Why?

(How?)

A good news story provides answers to each of these questions. For example, if you're writing a story about a new database you'll need to answer questions like:

- What is it? Is it the first of its kind?

- Who created it? Who else is involved? Who will maintain it? Who will use it?

- Where is it based? Are there any partners based anywhere else? Where will the users come from?

- When is it released? How long have they been preparing?

- Why has it been created? What is the need for it?

- How does it fit into the bigger picture of other resources? How can people start to make use of it? How does it fill a gap in the market? How will it affect the science people are doing?

If you look at any news story from a reputable source you'll find that you're given all these answers and more:

```
A baby was born on a London bus during rush hour after the driver
and passengers came to the mother's aid.

Olatidebe Agboola, believed to be the first birth aboard one of the
capital's buses, arrived weighing 7lb 8oz at the back of a No394
in Hackney last Thursday.

His parents have given him the middle name Dennis, after the
vehicle's manufacturer.

As Emiloju Fatima Lawal went into labour, driver Pauline Jacobs
alerted controllers to dispatch an ambulance.

She parked the single-decker near Mare Street to help Ms Lawal,
assisted by passenger Carole Allen, 60, a switchboard supervisor
at Homerton hospital.

Ms Lawal, 37, of Hackney, who was not due to give birth until
today, said: "A man asked if I was ok, I said 'No, I'm in labour.'

"A few minutes later he came out and I said 'Excuse me, the baby
is here.'"

Ms Allen said: "He just flew out onto the floor. I didn't feel
panicked, just relieved."

Ms Lawal, who has three other children, was taken to hospital and
was back home that day.

She said: "I want to say 'thank you' to Carole and Pauline for
everything they did."
```

Who was the baby? The mother? The driver? The passenger? **What** was the bus number and route? **Where** did this happen, and when? **Why** is it newsworthy? **What** was the outcome?

2. The Inverted Pyramid

A good journalist puts the most important facts at the beginning and works 'down' from there. Ideally, the first paragraph should contain enough information to give the reader a good overview of the entire story. The rest of the article explains and expands on the beginning.

In the story about the baby, most of the answers to the five 'W's appear in the first sentence, known as the lead.

Who: a baby. **What:** born. **Where:** on a London bus. **When:** in rush hour.

A good approach is to assume that the story might be cut off at any point due to space limitations. Does the story work if the editor only decides to include the first two paragraphs? If not, re-arrange it so that it does.

This story was sent in to the newsletter in 2005:

```
Medline contains approximately 13 million abstracts mostly
concentrated in biomedicine. It expands at roughly 1/2 million
per year and represents a large source of unstructured
knowledge. The need for computer driven mechanisms to access it
is obvious.

Tools such as PubMed allow to find Medline abstracts that
contain key terms fed by the researcher. Usually the volume of
the results is big and leads to a lot of reading only to get an
overview.

EBIMed is a web application that combines Information Retrieval
and Extraction from Medline. EBIMed finds Medline abstracts in
the same way PubMed does. Then it goes a step beyond and
analyzes them to offer a complete overview on associations
between Swissprot protein/gene names, GO annotations, Drug names
and Species. The results are shown in a table that displays all
the associations and links to the sentences that support them
and to the original abstracts.

By selecting relevant sentences and highlighting the biomedical
terminology EBIMed enhances the ability of the researcher to
acquire knowledge, relate facts, discover implications and,
overall, have a good overview economizing the effort in reading.
```

The actual news is buried; you can find it in the third paragraph, if you can be bothered to read that far!

This is the story as it appeared in the newsletter. It gets to the point straight away – the reader immediately knows why this story might be relevant and worth reading – as well as including some of the missing facts, like who developed it and how it can be accessed.

```
Sick of ploughing though hundreds of Medline abstracts? Help is
at hand. The text-mining team at the EBI, led by Dietrich
Rebholz-Schuhmann, has developed a new, freely available web-
based application, EBIMed, that will automatically analyse your
selection of Medline results.

The user enters search terms in the same way as when using
PubMed. But apart from returning the list of abstracts relevant
to the search terms, EBIMed performs additional tasks: (1) it
searches for concepts in the text; (2) it identifies pairs of
concepts occurring together ("co-occurrence" or "hit-pairs");
(3) it matches these terms to entries in selected biomedical
databases; and (4) it generates overviews on of the findings,
for example including a ranked list of "hit-pairs".

Clicking on any of the listed hits leads you to the relevant
sentences and to the abstracts of the papers in which they were
found; you can also link to the UniProt/Swiss-Prot record for
any protein listed, functional annotations in the Gene Ontology
(GO), drug names in Medline Plus and species in the NCBI's
taxonomy browser.

More information can be found at www.ebi.ac.uk/Rebholz-
srv/ebimed.
```

3. People...and what they say

News stories are really all about how people are affected. On the previous page we saw how a dry story about a new web application became much more interesting and relevant when it was targeted towards the audience and how they could benefit.

```
Sick of ploughing through hundreds of Medline abstracts? Help is
at hand.
```

You might spend some time focusing on one or more individuals – is this the first big project for a new group leader? Or perhaps it's going to help out a certain group of scientists?

```
The story of Claus Nerlov and his favourite genes, C/EBPα and
C/EBPβ, is of a long, successful relationship spanning more than
15 years. This September was an especially bumper month in
Monterotondo with the publication of two papers in NCB and PNAS,
the second arising quite by chance when some of Claus'
apparently disappointing results turned out to be crucial for
head of outstation Nadia Rosenthal's team.
...
```

Try to quote people. It adds a personal touch to the story, and you know the journalist has actually spoken to the people involved, and – most importantly – it makes the story more interesting and readable.

Use a quote to explain an aspect that you would otherwise have simply reported:

```
The researchers developed a new technique, reciprocal allele-
specific RNA interference, inspired by one the Steinmetz group
had previously created to study yeast. "It extends the power we
gained in yeast: we can go from a whole region of DNA to the
actual causative gene," says Lars.
```

Or to add a more personal touch to the story:

```
Why did the chicken cross the road...?
To get to the new canteen, of course. 31 August saw the opening
of EMBL Heidelberg's brand new 'casino' in the ATC. With its
greater capacity, it will cater for the expanded courses and
conferences programme and, from November, hungry nuclear
physicists from the neighbouring Max Planck Institute.
The move was an incredible feat of organisation on the part of
the kitchen team. Starting on Friday after close of service,
they packed up and shipped their entire operation, seamlessly
opening again for lunch on Monday at the new site.
Reactions varied, but the diners were all suitably impressed.
Anna Maria Subosco from Reception was amazed. "It's very
elegant. I'm not used to having so much space." Philip Gebhardt
and Julia Willingale-Theune of ELLS very much enjoyed their
lunch: "I had fish with rice and I think Julia had a curry and
some salad," said Philipp. A peculiar combination, Julia? "I
couldn't find what I wanted. But I'm sure we'll get the hang of
it in a day or two."
```

4. Have an Angle

Most stories can be presented using a particular angle or 'slant'. This can help make the purpose of the story clear and give it focus.

```
EMBL-PhD student Simone Weyand from the Weiss team at the
Hamburg Unit recently visited the Eton High School close to
Windsor castle. Within the EMBL E-STAR programme, Simone had
proposed to visit a couple of renowned high schools and to teach
the students crystallography and the art of how to crystallize a
protein. Prior to her visit, Simone had discussed with Dr.
Stephenson, the master of natural sciences within Eton College,
the best way to set up such a one-week course. It was agreed to
split the week into a theoretical part and some small hands-on
sessions, which were to be done by the students on their own.
...
```

So far, so boring. To find an angle, try to pinpoint the most unusual or interesting aspect of the story. Here, it's that Simone went to Eton College, of all places. Here's how this story appeared in the newsletter.

```
It was every schoolgirl's dream come true recently for EMBL
Hamburg E-Star PhD student Simone Weyand, who spent a week at
renowned UK public school Eton College teaching the boys the art
of crystallisation.

Simone took the "Crystallisation Starter Kit", originally
developed by Manfred Weiss in collaboration with Jena Bioscience
for the EMBO teacher's workshop at the Hamburg Unit in 2003,
where she was also one of the instructors. She split the week
into a theoretical part and some smaller hands-on sessions.

The teachers and students of Eton were very impressed with
Simone's presentation and tutorials, and were quickly able to
grow some beautiful hen egg-white lysozyme crystals. The course
was so successful that Eton decided to include this activity
into their regular curriculum.

The college, which is near Windsor, has always been popular with
the royals – Princes William and Harry went there most recently
– and boasts several British Prime Ministers among its alumni,
as well as the EBI's own Ewan Birney. The Eton way of life
meant, among other things, that Simone had to be accompanied by
a chaperone (called Madame) at all times.

Simone will go for a second visit in October, when the students
will start to crystallise proteins. Let's hope that this event
will spawn many new structural biologists in the future.
```

5. Keep it simple - keep it tight

Don't make the mistake of thinking that by using jargon, formal language, complicated sentences and going into great detail, you're making your story sound important! It just makes it boring. Report the pertinent facts in a language that can be understood by everybody. Use an analogy if it helps to explain a concept better.

A story beginning like this was sent in to the newsletter last year:

```
The Chemical Biology Core Facility provides screening expertise
for the EMBL, the DKFZ and the University of Heidelberg and is
helping researches to identify small molecule modulators of
biological functions. High-Throughput-Screening (HTS) is
performed on the basis of a large library of small molecules
which are tested in various biological assays encompassing
standard ATP-consumption assays, transfection assays and
cytotoxicity assays. Since its introduction in 2004 the first
library of 50,000 compounds had been used in many campaigns, but
meanwhile the library reached the end of its life span: stock
levels of the material were running out and the resupply of
material was getting unreliable. Therefore in 2007 the
construction of a new screening library has been worked out.

For the selection of a new screening library a number of more
than 5 million structures have been collected from compound
catalogs of all major vendors (most of the catalogs of the ZINC
database were included) and a virtual database was constructed.
The content of each catalog was analysed for its structural
overlap with other catalogs. Eventually the compound selection
focused on catalogs from 3 leading vendors in the field each
offering large collections of compounds covering different
synthesis schemes with minimal structural overlap with
competitive catalogs. In addition the selected vendors offered
highly competitive prices combined with attractive options for
resupply and follow-up synthesis services.

The composition of the catalogs of the 3 selected vendors were
further analysed on the basis of their scaffold content that
means each individual compound structure was virtually
fragmented into its core-part (the scaffold) and its sidechains.
...
```

It continued like this for some time longer. The crux of the news was reported in the newsletter in four simple paragraphs:

```
EMBL Heidelberg's Chemical Biology Core Facility, which provides
small molecule screening expertise to EMBL, DKFZ and the
University of Heidelberg, has a new diversity oriented screening
library composed of no less than 79,000 compounds.

High-throughput screening relies on rapid testing of large
library of small molecules for activity against biological
assays. The core facility's first library of 50,000 compounds,
which was introduced in 2004, has been used in many screens; it
is reaching the end of its life span and stock levels are
running out.

For the new library, more than 5 million structures were
collected 'virtually' and put through a rigorous selection
process to see if they made the grade. In addition, they were
analysed on the basis of their 'scaffold' content to ensure the
optimum coverage of chemical space – each compound structure was
virtually fragmented into its core (the scaffold) and side
chains.

"A scaffold-based but chemically diverse selection like this
allows more informative screening for the benefit of the
research groups," says Joe Lewis, head of the Chemical Biology
Core Facility.
```

6. A few further tips

- Think about whether your story is really newsworthy. To be so, it should contain at least one of the following characteristics: proximity, prominence, timeliness, human interest, oddity or consequence.

- Not everyone who's reading will know something about the subject. Assume that the reader has never read your publication before. You may need to add some background, but brief explanations of projects or concepts can always go towards the end. They're not part of the news.

```
The UK's Biotechnology and Biological Sciences Research Council
(BBSRC) has made a £10million investment in EMBL-EBI to support
it as the central hub of the European Life-Science
Infrastructure for Biological Information (ELIXIR). The funding
will permit a dramatic increase in the institute's data storage
and handling capacity, placing the UK at the forefront of this
multinational initiative.
"This is an important milestone," says EMBL-EBI Director and
ELIXIR coordinator Professor Janet Thornton. "In particular it
means that we will be able to implement next-generation data-
handling and storage solutions to fuel future developments in
basic biology, medicine, agriculture and environmental
sciences."
ELIXIR involves 32 partners from 13 countries and aims to
establish a sustainably funded infrastructure for biological
information in Europe. It will support life science research and
its applications to medicine, agriculture and food security, the
environment, the bio-industries and society.
```

- Be active in your writing. The more action sentences that are included in the news story, the more a reader will feel that it really happened. Try to avoid passive sentences – not easy when you're used to scientific writing!

- Try to think of a catchy headline if possible.

- When you're writing for the web, most of the same principles outlined here apply; but do assume that your reader will devote even less time and attention to the story that a print reader would. Reading from computer screens is tiring for the eyes and about 25% slower than reading from printed matter. Make sure you answer the Five Ws as early as possible. Keep your paragraphs short.

- When you think you've finished, edit the story…and edit again. Remove words which aren't completely necessary and avoid repetition. As a rule, journalists will not use a long word when a short one will do. Use 'begin' rather than 'commence', 'used to' rather than 'accustomed to', etc.; this makes your writing precise and succinct, and intelligible to the vast majority of readers.