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:

(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](http://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.

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.

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.

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 into 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 researchers 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 the 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 analyzed 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 analyzed 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 £10 million 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 Vs 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.