

The World Wide Web from its origins

Science inspired the World Wide Web, and the Web has responded by changing science.

1 'Information Management: A Proposal'. That was the bland title of a document written in March 1989 by a then little-known computer scientist called Tim Berners-Lee, who was working at CERN, Europe's particle physics laboratory, near Geneva. His proposal, modestly called the World Wide Web, has achieved far more than anyone expected at the time.

In fact, the Web was invented to deal with a specific problem. In the late 1980s, CERN was planning one of the most ambitious scientific projects ever, the Large Hadron Collider*, or LHC. As the first few lines of the original proposal put it, 'Many of the discussions of the future at CERN and the LHC end with the question "Yes, but how will we ever keep track of such a large project?" This proposal provides an answer to such questions.'

3 The Web, as everyone now knows, has many more uses than the original idea of linking electronic documents about particle physics in laboratories around the world. But among all the changes it has brought about, from personal social networks to political campaigning, it has also transformed the business of doing science itself, as the man who invented it hoped it would.

4 It allows journals to be published online and links to be made from one paper to another. It also permits professional scientists to recruit thousands of amateurs to give them a hand. One project of this type, called GalaxyZoo, used these unpaid workers to classify one million images of galaxies into various types (spiral, elliptical and irregular). This project, which was intended to help astronomers understand how galaxies evolve, was so successful that a successor has now been launched, to classify the brightest quarter of a million of them in finer detail. People working for a more modest project called Herbaria@home examine scanned images of handwritten notes about old plants stored in British museums. This will allow them to track the changes in the distribution of species in response to climate change.

- 1 Tim Berners-Lee was famous for his research in physics before he invented the World Wide Web.
- 2 The original intention of the Web was to help manage one extremely complex project.
- 3 Tim Berners-Lee has also been active in politics.
- 4 The Web has allowed professional and amateur scientists to work together.
- 5 The second galaxy project aims to examine more galaxies than the first.
- 6 Herbaria@home's work will help to reduce the effects of climate change.