The wild ideas, precursors, and dead ends that got us here

Dreams That Inspired the Net

The internet has become such an vital part of modern life that it's easy to forget just how new it really is. In historical terms, at half a century old, the net is barely out of its infancy. The basic shape may have gelled but the net's still being molded by our needs, and altering our expectations of it in turn.

Yet the net did not have to turn out the way that it has. The internet we know and love is a planetary system of computers that process and store information connected by networks to share that data. But the idea of gathering, organizing, and sharing all the knowledge in the world began long before Google.

In the beginning

In the deep past, cave art and early monuments like those at **Gobekli Tepe** and later at **Stonehenge** and elsewhere publicly displayed astronomical information thousands of years before writing. Depictions of constellations as animals served as memory aids for the myths that encoded and preserved that sacred knowledge while the stones served as calendars.

With **writing**, highly-detailed information could be recorded for long periods, whether it be the contents of sealed urns, contracts on tablets, or the deeds of kings carved into temple walls. Once fired, **clay tablets** became ceramics that can still exist, kept in temple libraries where priests studied them for ages.

Later, pens, ink, and sheets of **papyrus** (the ancestor of paper) – made recording even easier. Glued end to end, sheets became long **scrolls**: the very first books.

Scrolls filled the **first universal library** in history in the great port of Alexandria in Egypt. Ships docking there were searched for scrolls, which were copied for the Library before being returned to the vessels' owners. The **Library of Alexandria** thus amassed up to **700,000 scrolls** from its founding around 288 BC to its ultimate destruction. Julius Caesar is blamed for the first accidental fire, but Christian fanatics and Muslim conquerors burned the later depositories.

Caesar, however, also bound thin wooden tablets together. When folded sheets of papyrus or parchment (made from hides) were placed in between, the bundle became a **codex** – a bound, covered book like ours today. Codices were small, portable, cheap, and sturdy, holding much more (and more easily accessible) information than continuous scrolls ever could.

Christians soon used books to spread the word. After the fall of Rome, monks such as **Isidore of Seville** compiled **compendiums** of surviving knowledge in codices. These epitomes preserved much of ancient learning in monasteries throughout the Dark Ages.

Once printing was invented, books became so cheap and plentiful that knowledge exploded. Private individuals could hoard extensive libraries. **Dr. John Dee**, Queen Elizabeth's astrologer/magician/spy (the **original 007**), was likely the last scholar to have owned and read everything then available. His looted collection of 4,000 books is still **being reassembled**.

Before electricity

But sharing information remained a great challenge. Ancient empires posted bulletins, which by the Renaissance became monthly **gazettes** and eventually **newspapers**. Their printers became shapers of opinion as well as reporters. **Ben Franklin**, who started as a printer, understood the value of a free press in a democratic society. He founded the postal system for the US and the first lending library, too.

The quickest means of communication had been by beacon fires or courier. The first was fast but only carried one bit of news and the other subject to interference. Under Napoleon, the French established a **semaphore telegraph** across the land: lines of high wooden towers within sight of each other that spelled out messages with movable arms.

One Victorian precursor to the net actually used tubes – **pneumatic tubes**, like those found at drive-up banks, shot large cannisters of mail under the streets of Manhattan for the Post Office. A cat was sent in its initial demonstration in 1897. Other species followed – including even goldfish – and the tubes delivered at least one sick kitty to the hospital.

Speculations and first connections

The first real networks began in the 1840s with the electric telegraph and grew alongside railroads.

Undersea cables to Europe were strung by the Civil War and around the planet by the First World War.

Among the new ideas at the time was the **Mundanium**, an archive in Belgium founded in 1910 to bring peace and unity to Europe by sharing all the world's printed knowledge (including erotica), with 12 million index cards, stretching almost 4 miles.

To organize it, the founders invented the **Universal Decimal Classification System**, still in use by libraries. Their use of **microfilm** inspired Vannevar Bush, the head of U.S. scientific research during World War II. He published an essay called "**As We May Think**" in July 1945, about a device he called the "**memex**", an electronic tool to look quickly through books and other documents on film. The memex has been cited as the inspiration for the personal computer, the mouse, hyperlinks, and the World Wide Web.

A **warning**, perhaps, came from surrealist Argentine writer **Jorge Luis Borges**. His 1944 story, "**The Library of Babel**" depicted an infinite library with books containing every possible combination of letters. Searchers despaired of finding the one volume that indexed everything. It sounds oddly familiar...

True internet precursors appeared in the late 1970s, **Videotex** connected terminals or TVs to mainframes by modems. This approach was never very popular save in France. Their **Minitel**, rolled out in 1978, had small, free, easy-to-use terminals for a nationwide directory of telephone and address information. Train reservations and mail-order purchases could also be made and stock prices checked. There were message boards and even online dating services and computer games. It was finally retired in 2012.

But before PCs or the web, the first systems truly heralding the future were already online. **Bulletin board systems** (BBS) used dumb terminals (basically teletypes with monchrome screens) to connect to huge mainframe computers. Users could upload and download data and software, read news, even chat with others, a real foretaste of things to come.

BBS services grew in popularity during the early 1990s but their golden age was brief. They declined rapidly with the spread of the Apple computer, faster dial-up modems, and the first web browsers with graphic capabilities. However, a few bulletin boards are still **maintained** by nostalgic hobbyists.

Curiously, science fiction never saw the PC or the net coming. The power of the network, the real strength of the net, was never even imagined. But technical visionaries have not stopped dreaming, and tomorrow's internet may be even more radically different from today's reality than the ancient dreams were.

WordPress 5 Is Here

WordPress version 5 was just released. The big new feature in WP 5 is the new back-end editor, **Gutenberg**. The news caused a bit of angst in the WordPress community, as Gutenberg is a departure from previous versions. But it will help WP 5 provide a more What-You-See-Is-What-You-Get experience for WordPress site authors and admins.

Version 5.0 integrates Gutenberg as the default editor. Next year should see many new plugins that take advantage of its block-based architecure. Read more about it here: **https://wordpress.org/gutenberg/**

WordPress has always excelled at adding new features without breaking existing sites. Its one-button update, for instance, is quite an engineering feat unmatched by other content-management systems.

The transition is expected to be uneventful in most cases, but some plugins, like **WooCommerce** (to v3.5.1 or later) and **Advanced Custom Fields** (v5.8 or up), need to be updated BEFORE the upgrade. But you should make sure *all* your plugins and themes are updated before upgrading WordPress. And you can do that with no risk! We can copy your WP site to a sandbox where you can upgrade the plugins, and then WordPress, without worrying about affecting your "real" site. Once you're confident it will go smoothly, and resolve any issues that surface in the process, you, can apply the updates to your main site.

But don't worry: if you just dislike the new system, you can revert to the old interface for a while. Or you can opt for a Managed WordPress hosting option where we take care of the details of upgrades like this at **https://www.swcp.com/wpmonitor/**

If you have any questions about this, please ask us by phone or email. We also host free "WordPress Workalongs" here at our **Ideas & Coffee coworking space** on the first two Thursdays of each month, where site owners and developers get together to help each other solve problems and learn new things, and other gatherings of interest, too. Check the SWCP Event Calendar at **https://www.swcp.com/events/**.