

Log in here for the African

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THE INTERNET, despite its 40-50 million users and explosive growth, is still in its infancy as a popular global information system. Three years ago hardly anyone outside a university had even heard of it. Then came the World Wide Web (WWW)—that part of the Internet that allows colour graphics, and "clickable" hypertext links that can lead to information residing on any of seven million networked computers around the world. Because of this we are witnessing a publishing revolution. Also, the ease of interactivity — via electronic mail, discussion groups, Internet Relay Chat (IRC) and the like — is enabling a communication revolution among users around the world.

In computer magazines we read how those with high speed access can indulge in video conferencing, listen to real-time audio, and play with the Internet's emerging 3D virtual reality technologies.

But this issue of *Review* is not concerned with these latest bells and whistles. Most of the contributors are South Africans, concerned with how information technologies can be used for the benefit of the new South Africa, for Africa as a whole, and their impact on the media.

In the US there are about 50 telephone lines per 1000 inhabitants. Sweden, where I live, leads the world with 68 lines per 1000 inhabitants. Dave Wilson, Rhodes University academic and

contributor to this focus, tells us that in Africa probably only one person in 1000 has access to a telephone. *Mail & Guardian's* Bruce Cohen, in his contribution, comments that "millions of people from Angola to Afghanistan will never be wired to a lightbulb, let alone the information highway, by 2004. We know that millions of young people in our own country will never touch a PC keyboard in their lifetimes".

■ SCHOOLS

This is no cause for despondency. Not everyone has to have a computer. If there is the

political will to provide global information access at schools, in libraries, other public places, then society could still benefit greatly.

Such schemes are already underway in South Africa, and school networking is developing in several areas. There is already a Western Cape Schools' Network, the Pretoria Education Network, the Eastern Cape SchoolNet Project, and Maritzburg College online (in KwaZulu/Natal). During October an Internet and Educational Computing Conference took place in the Western Cape, and reports from the conference, available on Internet, were published by Western Cape school children!

In Sweden there is a strong belief that children need to become "Internet literate" to deal with the emerging Information Age. More than 40 schools now have full Internet access as part of the Swedish SchoolNet project, and the number is rising fast.

There are many such programs, and increasingly schoolchildren around the world can communicate with each other via the Internet, both by e-mail, and in real-time text-based environments, such as IRC.

■ GOVERNMENTS

Several governments have WWW sites, with the quality of information varying greatly. Canada has an Open Government pilot project providing access to the House of Commons, the Senate, the Supreme Court, and various federal departments and agencies. You can even listen to the national anthem.

Vast amounts of US Government data are available at its FedWorld site, which describes itself as "a one-stop location for the public to locate, order and have delivered to them, U.S. Government information."

In South Africa increasing amounts of information are being made available at the Internet site of the South African Government of National Unity. Minister of Justice Dullah Omar is among those currently exploring how to use new technology to promote open government and two-way communication with the people.

Internet connectivity and activity is clearly taking off in South Africa. This is the time for open debate and the formation of policies about how best to move forward with the Internet.

Let us hope for an open policy of electronic information flow in South Africa. After a recent past of censorship, Total Strategy information control, psychological warfare, repression of journalists, and news media concerned primarily with white society, change is suddenly possible. We're already seeing falling newspaper readership, 80 new radio stations licensed this year... In this situation of flux, the Internet should be fully exploited in strivings to promote information democracy.

At a recent conference on future communication policy, Professor Guy Berger, head of the Department of Journalism and Media Studies at Rhodes University, urged the government to improve its internal communication, upgrade its poor media liaison performance, and promote the communication potential of citizens by subsidising community radio stations and developing interactive online communications, such as Internet e-mail.

■ INITIATIVES

There are already a number of innovative and progressive communication initiatives in southern Africa, including MisaNet (see David Lush article), and SangoNet, a regional electronic information and communications network for development and human rights workers, *Mayibuye*, the journal of the ANC is online, as is the Centre for Democratic Communications, and the ANC Information Services, which is an excellent guide to southern African electronic resources.

Internationally, Greenpeace, Amnesty International, Unicef, Friends of the Earth, Rainforest Action Network and many other humanitarian and environmental organisations offer excellent archives of information, and often up-to-the-minute reports on current campaigns.

In fact, all forms of publishing, formal and informal, are flourishing on the Internet. Within two years more than 600 newspapers, nearly 650 magazines, and over 400 radio and TV sites have been established.

Many are going online for fear of being left behind, others because of new possibilities. Former *Rolling Stone* editor Michael Goldberg publishes the rock-and-roll publication *Addicted to Noise* because "... the Net right now is the best communications medium available to disseminate integrated images, text, sound and video to a worldwide audience. It's instantaneous".

Some are just taking advantage of this new low-cost opportunity to publish widely. As an example, some friends and I publish *Orbit*, an online travel guide born on the Net. We're currently getting some 7 000 "hits" a day. Indeed, the entire international travel industry is rushing to be online — airlines, travel agents, tourist boards, resorts, hotel chains, the Lonely Planet series, the Kruger National Park — all of it.

Researchers are publishing, industry is publishing, poets and artists are publishing. The geeks and the freaks and the cyberpriests are all there too. But so what. Diversity is part of human society. We've all heard the hype about pornography on the Internet, and the thought strikes me: although the Internet is my information medium of choice, I have never seen any pornography, though I have time and again encountered it on TV. On the Internet you choose what kind of information you want to consume.

cyber library

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But back to publishing...

Some online publications are already operating at a profit, either through advertising, like *Aftonbladet* in Sweden, the *Thomas Register* in the US, and South Africa's *Financial Mail*; through sponsorships or through various fee-based services — like Time Inc., which attracts some 3.5 million readers to its WWW site each week.

■ DIFFERENCES

There are interesting qualitative differences between print and online versions of publications. In mid-1994 my colleague Mark Comerford and I put up the first Swedish newspaper on the Net, *Aftonbladet*. The first issues tried to duplicate the print version electronically, but soon the understanding arose that we were dealing with a new medium with new possibilities. Information can be continuously updated. San Jose's online Mercury Center for example, revises its breaking news headlines hourly. Errors can be corrected whenever detected. The structure need not follow a first page to last page format. Geographical boundaries disappear, and electronic media can reach global audiences. Space is no longer a problem — "The Net allows us to publish in depth," writes Cohen.

Today *Aftonbladet* does not regard itself as a newspaper company, but an information company, providing news and entertainment and facilitating communication via a variety of platforms — print, CD, radio, television, Internet, video and fax.

In this issue of *Review* Neil Jacobsohn, general manager of TML's electronic media, comments that at Times Media Ltd the realisation grew "that we were not putters of ink on paper. Rather, we were creators and vendors of content, and increasingly the medium by which we delivered this content would become less important."

The electronic version of the *Chicago Tribune* is available on the America Online network as *Chicago Online*. It is attempting to re-invent itself as the community's primary online resource, and according to writer Alison Steube "its goal is to put a city, not a newspaper, into cyberspace".

In a recent e-mail interview with Rhodes journalism student Michele Aires, Irwin Manoim, an editor at the electronic *Mail & Guardian* (eM&G) said the long-term commercial goal was to set up a site which behaved like a village mall, "where people can meet, chat, read the news and gossip and most important, shop. We have a seven-stage plan to proceed from where we are now (recycling the print version) into creating various different e-zines with a life and character of their own, one dealing with arts, music, cyberculture and the like, one dealing with technology, etc. etc."

The only obstacle, said Manoim, was that the Web was still in its infancy in South Africa. "Most local Internet users have e-mail and nothing else;

advertisers are still unsure about the new technology; there isn't yet an American-style culture of buying stuff by credit card over the line; our own Internet providers do not yet have a "secure" server for commercial transactions."

■ INTERACTIVITY

Interactivity is one of several dynamic factors that suddenly become possible with electronic publishing. For Cohen, what makes the Internet such an important new publishing medium is that it allows information to be placed in context, and true interaction between journalists and their readers can take place.

To promote interactivity, the eM&G has an e-mail discussion forum where "readers" talk to each other, comment on stories in the paper, debate issues in SA society, get into furious arguments with one another, and even plan real-life parties together. ANC MP Willie Hofmeyr is a frequent participant in the discussions.

The innovative Internet magazine *HotWired* links stories to "threads", a set of bulletin board discussions that allow users to join ongoing conversations about issues raised in the main story.

Aftonbladet, using IRC technology, invites readers to join in real time text-based discussions.

It is now common practice to include writer's e-mail addresses — often hyperlinked to their byline — resulting in much direct dialogue between journalists and their readers.

■ ONLINE RESEARCH

In 1991 — long before the advent of Internet publishing, Tom Koch wrote "Journalism for the 21st Century" — a visionary book at the time, in which he predicted that online data technologies would empower journalists "by providing them with information equal to or greater than that possessed by the public or private official".

An early British example was an ITV Channel 4 documentary *The Scottish Eye*, produced by investigative journalist Duncan Campbell in May 1992.

The subject was William Jarrett, then Professor of Medicine at Glasgow School of Medicine, regarded by many as the scientist most likely to produce a vaccine against AIDS. A key figure at various international AIDS conferences, Jarrett had received millions of pounds in grants to pursue his research.

For years journalists unquestioningly cited what Jarrett had to say about himself, and one could read stories such as: "In the year 2000 the world may think of Glasgow as a place where a tiny team of scientists developed a weapon to fight the biggest threat to civilisation since the Atom bomb — Aids. The scientist who could put Glasgow on the map in

Don't be fooled...

...by the commonplace observation that "Nobody owns the Internet, nobody controls it". The cables have owners, the information meets gateways. Internet providers can and do act as censors. Surveillance is more than possible...

Around the world the Internet has its enemies, who fear open access to information and want to control it. Encryption of information is already banned in France. Obviously the French government doesn't want its citizens writing anything the authorities can't decode. The only other countries with such laws are Iraq and Russia, although in September the 34-nation Council of Europe agreed to outlaw strong encryption products which do not make "keys" available to governments. This may soon become law. In the US the security authorities are feverishly keen to have access to

all information flowing on the Net. In China there are less than 10 000 Internet users. To get access, you have to prove to the Chinese Academy of Sciences that you need it for research purposes. In Hong Kong there is huge Internet activity, and one wonders what 1997 will bring in this regard!

Only last week a network systems operator at Stockholm University proudly told me he could produce detailed reports of Internet activities by users at the university. "I can analyse what information users have downloaded, and where they got it from" he said, apparently oblivious to the invasion of privacy this entailed.

"Behind the hype," writes Misa's information co-ordinator, David Lush, "the Internet remains vulnerable to the same abuse — censorship, propaganda, regulation and monopolisation — as other, more conventional media".

this way is Scottish genius Professor Bill Jarrett..." (*Glasgow Herald*, 8 December 1989).

Campbell searched in Medline, the major electronic source for biomedical literature, and discovered that research claims being made by Jarrett were completely false!

Today, the ability to interrogate databases is increasingly regarded as a basic requisite skill for journalists. In the US several stories generated with the assistance of computer-aided research have resulted in the coveted Pulitzer Prize. At the *Philadelphia Inquirer* one cannot rise beyond cadet reporter status without being competent in using international databases.

Around the world schools of journalism are restructuring their curricula to include instruction in computer-assisted research and reporting.

In September this year, in his inaugural speech as the new head of Rhodes University's Department of Journalism and Media Studies, Professor Berger told the gathered dignitaries:

"Along with the new media comes the need for enhanced research and analytical skills, and the ability to sift, separate and link levels of information. Our students will increasingly have to think up their stories in various levels of complexity and comprehensiveness. Operating in a world of hypertext will also require a broad liberal arts and scientific knowledge, in order to make the links between information..."

Mid-career journalists everywhere are reschooling themselves. During the past year more than 250 radio, TV

cyber smalls

TELL the world about it. Place a classified advert on the World Wide Web with the Mail&Guardian — for free!

Just e-mail us your birth and marriage notices; love letters, personals; goods or accommodation wanted or for sale; public events or free happenings.

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eM&G

The Electronic Mail&Guardian

and print workers in Sweden have attended Internet research courses at the Department of Journalism in Stockholm. In January 1996 the entire MNet Carte Blanche team in Johannesburg plans to go "back to school" to learn electronic research methods — how to interrogate global databases and use the Internet as a tool.

An ever-increasing number of journalists use the Internet to communicate, to track down experts in various subjects, to identify trends and attitudes, to monitor debates, to gather statistics, to search in libraries, to obtain a variety of viewpoints, to uncover new sources of information, to assemble background facts, to enquire into esoteric subjects, to extract and analyse data from databases...

When major news breaks — the assassination of Rabin, the Kobe earthquake, the Bosnian peace agreement, whatever — wired journalists around the world collaborate with each other to share sources, give tips and information. Web sites are instantly created to provide focal points for those needing information. The Poynter Institute of Media Studies in Florida keeps up to date guides for journalists covering breaking news.

NEW TOOLS

As the information available via the Internet continues to increase, a wide range of new tools and techniques for dealing with mega amounts of data is arising. In just the past few months a number of powerful new easy-to-use "search engines" have emerged on the Web. Employing artificial intelligence, natural language searching, relevance ranking and full-text search capability, they can examine millions of documents within seconds and retrieve those that match your search criteria.

Some electronic publications, like the eM&G, have searchable archives.

The powerful tools are fast forging the Internet into the world's most sophisticated and complete research environment. One of them, Hytelnet, provides direct access to computers housed in libraries around the world. One can search the catalogues and order literature. Hytelnet can also link one to the world's major commercial database hosts, such as Dialog and Nexis/Lexis, allowing one to search among many millions of documents.

Journalists needing additional information, or expert opinion on a subject, can send a query to Profnet, from whence it is forwarded by e-mail to universities all over the world, and finally to those academics and researchers specialising in the particular topic.

Communication is a major aspect of Internet activity, and tens of thousands of subjects are constantly being discussed and debated in the so-called newsgroups. There are Internet tools which can search backwards in time through all these debates, and extract those that relate to ones subject of interest. SiftNews, a tool developed at Stanford University, can continuously monitor all ongoing newsgroup discussions, filter out those that match your criteria, and send them to you as e-mail.

The entire *Encyclopaedia Britannica* is available online (to subscribers) and it plans to become a complete knowledge base, being continuously updated and linked to other relevant sites. For example, an article on the Hubble telescope could be linked to a Nasa site where pictures from the space telescope are being continuously displayed.

At Stockholm's renowned Karolinska research hospital a friend of mine Dr Gudmundur Axelson regularly consults the Internet for new information which he knows is probably not in the text books. There is even a complete Virtual Hospital, where both laypersons and medical researchers can go for help ...

The entire works of Shakespeare are on the Net, searchable, and with words hyperlinked to a dictionary of terms. Project Gutenberg, with a goal of publishing 10 000 classic books on the Internet within the next four years, already has 250 titles online. You can search for words or phrases, or download the entire text.

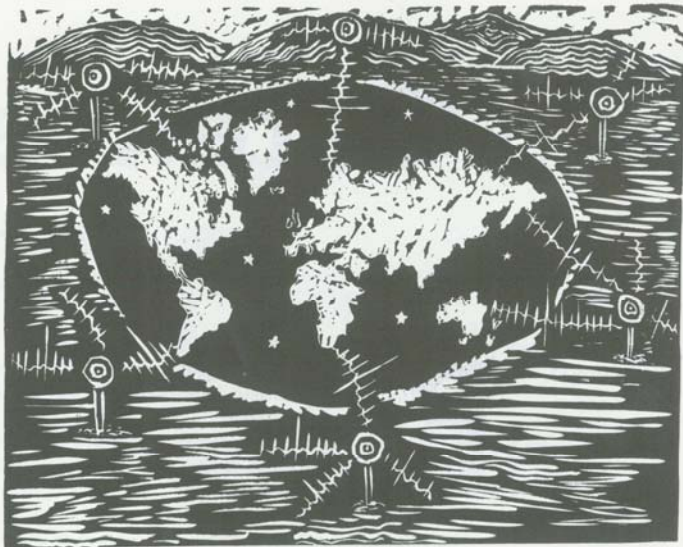
YAST

Actually, the information available on the Net is so vast, it is almost impossible to summarise "what is out there". Some 10 000 new host computers are added each day. As much information as the entire *Encyclopaedia Britannica* is added every two days. To belittle the Internet, to describe it as "only" this or "only" that, is to display a failure of the imagination. No one can grasp it in its entirety. Any one person can only understand it in part. There is something there for everyone, and it's big enough for all. Its impact on communication around the world is profound, and it is changing the way we present, access and think about information.

In his article in this issue, Andrew Morris, computer correspondent for *The Argus*, comments that information is not knowledge. Jacobsohn makes the same point: "Unlimited access to information does not mean knowledge or wisdom. Facts in isolation remain just that." Jacobsohn is making the point that placing information in context is the key skill of newspapering, "not a skill that can lightly be emulated by the New Age publishers".

I am not so convinced. Some of the New Age publications on the Internet are pretty good, both visually and content wise. Take a look at *Firehorse*, an Australian rave review newcomer aimed at youth that has never existed in print. It attracts tens of thousands of readers daily. I believe that traditional news providers are going to be — are already being — challenged by all manner of new "content providers" who suddenly have access to this medium of global communication and publishing.

Remember, it wasn't so long that typographers bewailed the advent of desktop publishing, and we heard all that nonsense about 20 different typefaces on a page. What actually emerged was a huge flourishing of design talent, as access to typefaces



and layout tools was taken out of the hands of the few. Now we are seeing a similar phenomenon with publishing on the Internet.

CITIZEN-FOCUSED JOURNALISM

Finally, I believe that in South Africa, the Internet could be the medium for a new, and necessary, citizen-focused journalism. The world has been watching South Africa for a long time. Now that apartheid has gone, how is this affecting the daily lives of the people of South Africa?

As of old, the foreign correspondents mostly live in, and report out of, Johannesburg. They tell us of high political happenings and car hijackings. Gravy train corruption and serial murders. But precious little about the people, about their hopes and fears, about how life is or is not changing for them.

Grahamstown's *Grocotts Mail* may be the oldest newspaper in South Africa, but it certainly doesn't represent the tens of thousands of people living almost on its doorstep. The nearby East London *Daily Dispatch* hardly seems to realise they exist either. Yet it wasn't so long ago that these very people lived in constant fear of the horror weapons and riot vehicles of the Apartheid regime. Who is going to tell us about these people? What do they have to say about their own situation? The world certainly won't learn anything from the foreign correspondents either, for whom Grahamstown is no more than the annual Arts Festival phenomenon.

A small start was made recently, when school children from a Grahamstown township wrote stories about life around them, and published on the Internet (<http://www.ru.ac.za/departments/journ>). In an article titled "High Failure Rates In Black Schools", Nomatamsanqa Matiwana wrote that high failure rates in Grahamstown are caused by a shortage of teachers.

"When there are no teachers in schools, there are no leaders for tomorrow. The students depend on teachers for knowledge, they need them. We appeal to the government to do something about this. Without education there is no future. We need help as soon as possible. I hope that a solution to this problem will be found soon."

The voice of youth. Let's hear the voices of many more South Africans.

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