Netizens and the News: Editorial

In this issue of the Amateur Computerist we include the text of a talk by Oh Yeon Ho describing how he started the OhMyNews on-line newspaper in Korea five years ago. He explains how Korean netizens were welcomed by the new on-line newspaper under the slogan “Every citizen is a reporter.” The newspaper began with 727 citizen reporters contributing to it in 2000 and by 2005 35,000 citizen reporters were part of those submitting articles. Mr Oh describes how this grassroots contribution strengthened both the Korean Netizens Movement and the OhMyNews newspaper. While there are such netizen journalistic endeavors in Korean (OhmyNews) and in Germany (Telepolis), there is none currently functioning in the U.S. The article “The Crisis in the U.S. Media and the 2004 Election”, considers how the 2004 election in the U.S. exposed the political weakness of the U.S. which doesn’t have such a citizen press. Also in this issue is a response to the Crisis article which explores the importance of the professional journalist and the role of the professional journalist in creating a media that serves the public.

To provide some perspective to this discussion about the type of on-line press the Internet makes possible, we’ve included in this issue, the article “The Effect of the Net on the Professional News media” written in 1994-5 by Michael Hauben. This article considers the future and proposes that the press will change its content in order to accommodate the form of media that will be brought about by the Internet. It is helpful to see the view of the future of the press that Michael proposed 10 years ago and to consider how much of the view he presents of the impact the Net will have on the media has come to pass. Also in this issue we include an article on the World Summit on the Information Society (WSIS). This is a U.N. initiative which has been going on for the past several years in which countries from around the world, and corporate and civil society entities explore what will be the future governing structure for the infrastructure of the Internet and how will access to the Internet be extended to people around the world. WSIS will culminate in a meeting in Tunis in November 2005. (See articles in this issue pages 18-24)

Also in this issue we include some e-mail exchanges and on-line posts which consider how the on-line user, the netizen could be included (but isn’t currently) in the process of drafting WSIS proposals. The WSIS meetings present a contest with the continuing role of ICANN in the governance and
management of the Internet’s infrastructure. (For earlier articles on ICANN and the issues involved in WSIS, see Amateur Computerist Newsletter issues Vol 8 no 2, Vol 9 nos 1 and 2, 1998 and 1999 at http://www.ais.org/~jrh/acn/Back_Issues/).

To give a flavor of the early spread of computer network connectivity around the world, this issue includes the first post from Korea to the international Usenet in 1984. There is a detailed article on how the first e-mail connection between the People’s Republic of China and the rest of the e-mail world was achieved in 1987. Also included is an e-mail exchange in 1992 that helped begin international computer communication to and from Vietnam. This issue also includes the result of a search in Korean newspapers for early references starting in 1994 to the concept of netizen.

The issue concludes with the proposal for a symposium about “Computer Networks, the Internet and Netizens: Their Impact on Science and Society” that was presented for the History of Science Congress which will take place in Beijing, China this summer. Sadly, it was not possible to find funding for several of the participants, so only a shortened version of the proposed symposium will take place. However, it is hoped that it will be possible to find funding so the whole symposium will take place sometime soon.

We expect that netizenship will continue to spread and we hope to have future issues which follow and document this development as it spreads around the world.

[Editor’s note: The following is the text of an address by Oh Yeon Ho founder of OhmyNews given at the Harvard Internet and Society Conference on Dec. 11, 2004.]

Korean Netizens Change Journalism and Politics – The Marriage of Democracy and Technology
by Oh Yeon Ho


In the book, I look back at the last four years of our experiment to change traditional journalism. At one point I wrote: “Who could have imagined that the Internet, which was first developed in America for military purposes, crossed the Pacific Ocean to Korea, and bloomed flowers of citizen participatory journalism.”

Yes, the Internet originated in America. But citizen participatory Internet journalism started first in Korea, with the slogan “Every citizen is a reporter.” The slogan is not only about changing journalism, but about changing all of society. That’s why, I believe, the Berkman Center invited me to share the experiences of OhmyNews and Korean netizens with you.

Questions from Americans

Before and after the 2004 U.S. presidential election, I met some famous Americans who were interested in OhmyNews. These included Donald Graham, CEO of the Washington Post, former Vice President Al Gore, and a liberal Non Governmental Organization (NGO) leader.

The meetings were respectively arranged at the request of the Americans. When I met Donald Graham last summer in his Washington Post office, his main question dealt with whether the Ohmynews model is the future of 21st century journalism.

I met Mr. Gore last month when he visited Seoul. He asked me many detailed questions off-the-record, so I cannot reveal what was said. But I got the sense that he is really interested in how the Internet can change politics.

And a NGO leader, in a San Francisco meeting last summer, asked me “How should we use the Internet to see Mr. Bush go home?”

The three Americans all have different backgrounds and different purposes in meeting me. But they asked the same questions: “Does the political change that OhmyNews started only work in Korea? Can it work elsewhere? How about in America?”

Right after I learned that Mr. Bush was re-elected, my Korean friends asked me “Korean netizens changed the face of politics, but American netizens couldn’t. Why is that?” I believe that many American netizens who are disappointed with Mr. Bush’s reelection may have asked themselves the same question.

I cannot answer that question directly because I
am not an expert in American politics. You, as Americans, may have the answers. Instead, I’ll go into what OhmyNews has done in terms of “new journalism” in the serial drama of political change in Korea in recent years.

Confrontation of Old and New media: The last day of Korea’s 2002 presidential election

Let’s look back to the last day of the 2002 Korean Presidential election campaign. Just eight hours before the start of voting, at around 10:30 pm on December 18th, Mr. Chung Mong Joon, Roh Moo Hyun’s campaign partner suddenly withdrew his support. This astonished the whole nation.

Because the competition between the reform candidate Roh Moo Hyun, and conservative candidate Lee Hae Chang was too close to call, Mr Chung’s withdrawal was a kind of atomic bomb.

Interestingly enough, the news provoked a last minute confrontation between Old media and New media. The conservative mainstream newspaper Chosun Daily changed its editorial and posed a question to voters along the lines of ‘Mr. Chung withdrew his support for Roh, will you?’

But reform-minded netizens including OhmyNews readers quickly mobilized overnight to fight Mr. Chung’s atomic bomb. They visited many Internet bulletin boards and posted urgent messages like “Mr. Chung betrayed his party, Roh Moo Hyun is in danger. Save the country, please vote for Roh.” They even called their conservative parents to persuade them, crying “If Roh Moo Hyun fails, I will die.”

OhmyNews reported Mr. Chung’s withdrawal and updated the story of netizens’ reactions every 30 minutes, all night long. The number of hits for that main breaking story was 720,000 in just 10 hours. Thanks to the nonstop reporting through the night, OhmyNews was the epicenter of reform-minded netizens.

On the night of December 19th, when Mr Roh’s victory was confirmed, I wrote on OhmyNews: “As of today, the long-lasting media power in Korea has changed. The power of media has shifted from conservative mainstream newspapers to netizens and Internet media.”

Some critics said I exaggerated. Maybe that’s the case. My declaration was made not by evaluating the last day’s combat and the final results, but by two years of watching the Roh Moo Hyun campaign for the presidency.

When Roh Moo Hyun began his bid for the presidency only one congressman supported him. And almost all conservative newspapers ignored or undervalued his campaign.

But netizens were different. They strongly supported Roh because the young netizens, in their 20s to early 40s, wanted to reform Korean politics. Whereas conservative media ignored Roh’s campaign, netizens set their own agenda and succeeded. The two-year process was a very significant example of the shift of media power.

Here is another dramatic example. In March this year, president Roh was impeached by the conservative party controlled congress. The conservative press were waiting for the Constitutional Court’s final decision, hoping to see President Roh resign. But netizens saved him. Let’s see a video clip of how OhmyNews reported their on-line and off-line demonstrations.

Power shifts: standards are challenged

Each political scholar has his own definition of power. I would say power comes from established standards. Those who have power set the standards, and in this way are able to maintain their power.

In the media market, too, they say “this is the standard, follow me.” The standards of 20th century journalism have been created and controlled by professional newspaper journalists.

But these standards are challenged by new Internet journalists: the netizens or citizen reporters. They challenge the traditional media logic of who is a reporter, what is news, what is the best news style, and what is newsworthy.

An American journalist, Creed Black, defined news like this: News is anything that happens to or near publishers and their friends. But in this internet age, we can say “News is anything that happens to or near netizens and their friends.”

The true internet media: two levels of interactivity

When we opened OhmyNews in 2000, we promised our readers that we would make
OhmyNews, the first true internet newspaper in the world. What does it mean when we say “true internet newspaper”? For me it is about making true interactivity work.

There are two levels of interactivity in news production and consumption. The low and the high. Low level interactivity is when professional reporters write, and readers send e-mail or post comments on bulletin boards.

Then what is high level interactivity? In this process, reporters and readers are equal. Readers can change themselves into reporters any time he or she wants.

So, our main concept, every citizen is a reporter, is not about tactics, it is about philosophy.

By the way, I didn’t invent the concept “every citizen is a reporter.” I just restored a long-forgotten concept. Just think back to the time when face-to-face communication was the only way to deliver news. Before newspapers and professional journalists, every citizen was a reporter. There was true interactivity. OhmyNews restored that.

We started OhmyNews with 727 citizen reporters, now we have about 35,000.

Our citizen reporters come from all walks of life. From elementary school students to professors. Citizen reporters submit between 150 and 200 posts a day, over 70 percent of the news content for OhmyNews.

We do pay our citizen reporters, but the fee is small. It is not in the same league as mainstream media. If the article goes up to Top News, we pay 20,000 won, about 20 dollars.

Many foreign correspondents who visited OhmyNews have said to me, “It is difficult to understand why citizen reporters enjoy writing articles for such small money.”

I answered, “They are writing articles to change the world, not to earn money.”

We give them something that money cannot. We make OhmyNews a public square and a playground for the citizen reporter and readers. The traditional paper says “I produce, you read” but we say “we produce and we read and we change the world together.”

So our main concept “every citizen is a reporter” is not only in the slogan. It is real. It is to change the world. That’s the power of OhmyNews.

The most profitable article in the world

Netizens can participate not only by sending articles but also writing readers’ comments and paying a voluntary subscription fee.

At the very bottom of every article, we provide a bulletin board for reader’s comments. When the issue of the article is hot, the number of readers’ comments can easily exceed 100. Sometimes there are as many as 3,000.

We started the reader’s comment system for the first time in Korean media market in 2000 when we opened OhmyNews. Now nearly all news sites – including newspapers’ web sites and portal sites – follow us.

Readers can read every OhmyNews article for free. But netizens can also contribute to OhmyNews by paying a voluntary subscription fee using their mobile phone or credit card.

Several weeks ago, a famous philosophy professor named Kim Young Ok wrote an article for OhmyNews about the Constitutional Court’s decision on South Korea’s capital relocation. Kim argued that the unelected court’s decision was undemocratic.

The article struck netizens. About 6,000 netizens contributed between one dollar and 10 dollars (the maximum). In the end, professor Kim earned over 24,000 dollars, roughly the average annual wage of South Korea. Kim’s article may be the most profitable in the world. Netizens set that fantastic record.

Here is another example. A woman citizen reporter, whose small business was having financial troubles, wrote an article about her situation. Our readers were moved by her story. In just two days, 650 OhmyNews readers contributed about 3,000 dollars.

Why in Korea? The People prepared

Two years ago, a team of Japanese journalists visited our office and learned about OhmyNews. After they returned to Japan, they started an Internet newspaper like OhmyNews, but so far it is not successful.

Several journalists from other countries informed me that they are preparing OhmyNews style Internet newspapers, but I have not yet heard any success stories.

So, your question might be “Why in Korea?” Our nation, our society, and our readers were pre-
pared to welcome and boost OhmyNews.

First, Korean readers were disappointed by the mainstream conservative media for a long time and yearned for alternative media.

Second, Korea’s Internet infrastructure is superior to most other countries. We enjoy over 75% broadband penetration. It makes multimedia, always-on service and interactive news service possible.

Third, South Korea is small enough that our staff reporters can reach the news scene in a few hours to check whether a citizen reporter’s article is correct or not.

Fourth, Korea is a uni-polar society. The entire country can be quickly engulfed by a couple of issues.

But the most important reason is that Korean citizens were ready to participate. Korea has a young, active and reform-minded generation, those in their 20s, 30s and early 40s.

A Japanese columnist at the Yomiuri Daily once told me “In Japan, OhmyNews’ model cannot be successful, because Japanese youth are not as active as Korea’s.”

Here, let me point out this question: How did Korea get such active netizens? It didn’t come easily. We Koreans have been paying dearly, since modern Korean history itself is the cost.

Struggling against military dictatorship to achieve democracy was the cost. Living in a divided nation is the cost. The Korean War in 1950, and The Kwangju Massacre in 1980 were the two representative events that Koreans paid in blood.

The Korean War taught people to keep silent in order to survive. The Kwangju Massacre too. But there has been an endless struggle for democracy and liberating from keeping silent.

The children of Kwangju and 20s

Specially during 1980s, university students stood on the street yelling “perish military dictatorship, unveil the truth about the Kwangju Massacre.” Some, including me, served in jail or made the uneasy decision to sacrifice future job prospects by demonstrating. We can call them the children of the Kwangju Massacre.

These historical experiences are the deep-rooted background of today’s active Korean netizens.

Now the children of Kwangju are making their voices heard in cyberspace instead of on the street. Married, with children, they still have their enthusiasm: “If we participate, we can make a difference.”

They are teaching the next generation to remember modern history, and to struggle for a more vibrant democracy.

The positive effects are incalculable. Participatory democracy is flourishing.

The marriage of democracy and technology

Here, I would stress this: technology itself cannot change society, only prepared people who can use technology positively can make society more democratic.

Almost two years ago The Christian Science Monitor (31, Jan. 2003) covered OhmyNews. The first sentence was “The marriage of a fledgling democracy and broadband technology has spawned a precocious new media child in South Korea that would have been unimaginable 15 years ago.”

The Christian Science Monitor was spot on. OhmyNews is a child of the marriage of democracy and technology. We have changed Korean media and Korean politics. And how might it affect others? How about America? That’s the question for you.

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The Crisis in the U.S. Media and the 2004 Election

by Ronda Hauben
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Without a press that can function independently of government the public is left disarmed

A critical question raised by the 2004 election in the U.S. is the role played by the media. Democracy and vibrant public discussion are intimately related. An election campaign in a democratic society is a time to encourage public discussion on the most pressing policy issues facing the society. The debate and discussion during an election campaign can become the basis for the policy decisions that the successful candidates will be under pressure to
Such a process traditionally requires a press which raises the issues and supports the exchange and consideration of a broad range of viewpoints. The 2004 election in the U.S. was a test of the nature and quality of democracy in the U.S. It was a test of how the supposed “democracy” the U.S. government claims to be promoting in other countries functions at home.

The 2004 election campaign was notable by its failure to provide the needed debate on issues. Take the U.S. policy in Iraq, as a commentator in the current issue of Foreign Affairs notes:

The recent American presidential campaign has had the perverse effect of postponing any serious national debate on the future U.S. course in Iraq.¹

The writer does not directly indict the press for the failure. Others, including a number of professional journalists, however, have been critiquing the U.S. press and trying to analyze the problem that is at the root of the current media crisis. In a segment of a recent PBS program, the Jim Lehrer Report², several journalists discussed the crisis in their profession. They acknowledged the low regard with which the public in the U.S. views the press. They also noted the long term attack on the press as “liberal”, and the lack of professionalism among some of their own people. They considered what actions are needed to change the critical view of them held by the public.

Another analysis of the problem is offered by Jonathan Mermin in an article³ in the World Policy Journal. Mermin proposes that the U.S. press fails in its professional obligation to be an independent critic of government:

A fundamental tenet of our First Amendment tradition is that journalists do not simply recount what government officials say, but function instead as the people’s ‘watchdog’ over the government, subjecting its words and deeds to independent scrutiny.

He admits, though “this is rare.” Mermin points particularly to the example of Judith Miller’s articles in the New York Times in early 2003. These articles stressed the existence of weapons of mass destruction in Iraq, echoing uncritically the pretext being given by the U.S. government to justify its invasion of Iraq. When asked about her articles, Miller’s response was:

My job isn’t to assess the government’s information and be an independent intelligence analyst myself. My job is to tell readers of the New York Times what the government thought about Iraq’s arsenal.

Without a press that can function independently of government, and which is able to critique government and its actions, the public is left disarmed. Given this situation, it is not surprising that the 2004 election could be anything but a rubber stamp for the incumbent.⁴

A different situation prevailed, however, in the 2002 Presidential election in South Korea. In the Korean election there was a press that functioned to help Korean netizens replace the conservative President with a reform candidate, Roh Moo Hyun, who had been outside the mainstream of Korean politics.

In a talk given at Harvard in December 2004, Oh Yeon Ho, the publisher of the OhmyNews⁵ on-line newspaper, spoke about the role of his newspaper in the Korean election. He describes⁵ the collaboration between Korean netizens and the on-line newspaper. He gives as an example an event that happened on the eve of the Korean Presidential election. Eight hours before the start of voting, another candidate who had been supporting Roh, withdrew from the campaign. The conservative newspaper Chosun Daily was quick to call Korean voters to follow this example and withdraw their support for Roh. The on-line community of Korean netizens who were backing Roh sprang into action, posting messages about the challenge and urging each other to help to counter it. OhmyNews covered the netizens activities, updating coverage every 30 minutes. “Thanks to nonstop reporting through the night, OhmyNews was the epicenter of reform-minded netizens,” Oh says proudly.

Compare this episode with the way the U.S. press covered the netizen movement supporting the Howard Dean campaign during the Democratic primaries. There was no press in the U.S. like OhmyNews. Instead the mass media was filled with negative campaign ads. There was pressure exerted on the Dean campaign to focus on traditional campaign tactics. Without a professional press ally to challenge the conservative role being played by the media, the netizens movement supporting Dean lost the ability to counter the conservative media and the conservative powers in the Democratic Party.

OhmyNews is an on-line newspaper that has a
professional newspaper staff, but which welcomes articles from citizen reporters. The newspaper also welcomes discussion of its articles by readers, and seeks to involve its readers in a participatory role in adding to the content of the newspaper. Mr Oh reports that the newspaper has 40 professional journalists and 35,000 citizen reporters submitting articles. When articles by citizen reporters appear, the citizen reporter may receive a small sum of money.

Mr Oh’s talk about the experience in Korea was presented at a conference held at the Berkman Center for Internet and Society at Harvard University in December 2004. The schedule focused on topics like the weakness of the U.S. netizen movement and the ways that business models can help to shape politics. The program for the conference did not question the effect of the lack of a newspaper like OhmyNews on the U.S. election campaign.

In an interview that OhmyNews journalists did with the Managing Editor of the Washington Post, they asked whether he thought that a newspaper like OhmyNews in the U.S. could have helped the Kerry campaign. He replied:

That’s an intriguing question. There was a point early in the campaign when it seemed that Howard Dean had harnessed the power of the Internet, but it wasn’t enough to lead him to the Democratic nomination.

Will the current ferment among professional journalists in the U.S. lead them to find a way to ally with the on-line netizen community? The continuation of the occupation of Iraq and the U.S. government’s efforts to demonize Iran and North Korea present professional journalists and the on-line netizen community with a continuing challenge. The 2004 election in the U.S. presented the world with the desire of netizens in the U.S. to challenge the conservative pro war politicians in both the Democratic and Republican parties. The lack of a professional press to support the netizens was a handicap they could not overcome. Will the post election ferment over the role of the professional press make it possible to solve this problem? The future of the professional media in the U.S. is in limbo.

Will there be professional media efforts to contribute to a form of on-line press like OhmyNews which welcomes netizen reporters and their contributions? The answer to this question may well determine whether there can be any effective political opposition to challenge the conservative media and conservative politicians in upcoming future elections in the U.S.

Notes:

1.[http://www.foreignaffairs.org/20050101faessay84102/james-dobbins/iraq-winning-the-unwinnable-war.html]


4. “James Mill, writing 180 years ago in his article ‘Liberty of the Press’ proposes that unless the people find some way to check government abuse and corruption, they will be plagued by corrupt government.

“Those in the position to rule would abuse their power for their own advantage.’ Mill felt, ‘If one man saw that he might promote misrule for his own advantage, so would another; so, of course would they all.’” quoted in Michael Hauben, “The Effect of the Net on the Professional News Media”, Chapter 13, Netizens: On the History and Impact of Usenet and the Internet [www.columbia.edu/~rh120/ch106.x13].

5. [http://english.ohmynews.com/articleview/article_view.asp?article_class=8&no=201423&rel_no=1]

6. [http://english.ohmynews.com]

7. Berkman Center for Internet and Society Conference, Harvard University, conference schedule [http://cyber.law.harvard.edu/is2k4/schedule]. “Are information and communications technologies making it possible for new forms of citizenship? Are new technologies drawing new people into the political process? Are we able to engage in politics in more meaningful ways than before? Is the impact greatest on local, state, federal campaigns? Are we able to become global citizens?”


This article appeared in TELEPOLIS at the URL: [http://www.telepolis.de/r4/artikel/19/19296/1.html]
Ronda Hauben’s writing in “The Crisis in the U.S. Media and the 2004 Election” (see above) presents a truly interesting point of view. Ronda is saying contemporary journalism is corrupted and less socially effective than years ago and she is saying that so called direct democracy sooner or later will take its place in our social life.

I would disagree with only one point: that the ordinary citizen can replace professionals easily and that the netizen should have now a shorter/easier road to participation in our political and social life.

Theoretically a professional journalist is supposed to be a person whose writing is moral and socially/politically focused. Few American journalists are people like that. The rest of them are spoiled by everyday life, corruption etc.

However even let’s say a spoiled writer should be a writer. Whether he/she wants or not, he/she must represent a certain standard in writing techniques which makes his/her text “easy to swallow” by the public.

As I observe in the local versions of the Internet (Polish, Russian, Bulgarian and also some lists in English) even people who have something smart and moral to say can’t express themselves in the shortest possible way, in the certain manner which makes their ideas popular. As I observe, even smart people have the tendency to make their material too long, not going to the point as quickly and clearly as possible. Long material without its necessary publicistic “temperature”, even if its author is right, doesn’t attract anybody. By temperature plus analytical style I understand a kind of “marriage” between generous thoughts and necessary techniques of writing. There is no question that some non-professional people on the Internet are intelligent and talented in their writing. There is no question that such people should be really welcomed to the world of journalism, but they are a minority.

I agree that some really talented writers should even be paid by certain media. A few, not all of them. When I started on the Internet in 1988 the media looked more promising. Now, after so many years, the Internet looks to me still not strong enough to compete with professional journalism. In my opinion both journalism and the network groups should coexist but exist separately. As much as they can, they should support each other in certain sensitive points and issues. So far the full support and cooperation is almost impossible for a couple of reasons. One of them is that contemporary journalism in many countries not only in the U.S. (as much as every single profession) cannot be free of all possible influences: corporate money, corporate culture, corruption etc. Let’s do not forget that the journalism is a guild profession which means a lots of money.

A really influential direct democracy supported by a good people involved in their country’s affairs equals netizens, is almost impossible now. Maybe it will become a reality some time in the future. When? Only when the transparency of political/economic life will be strongly forced by some strong (still unknown today) revolutionary factors. I would compare the role of those factors to DNA testing in forensic science :) today.

__________________________________________________________________________

“The archdeacon contemplated the gigantic cathedral for a time in silence, then he sighed and stretched out his right hand towards the printed book lying open on his table and his left hand towards Notre Dame, and he looked sadly from the book to the church:

‘“Alas,’ he said, ‘this will kill that’....
This was the presentiment that as human ideas changed their form they would change their mode of expression, that the


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[Editor’s note: The following analysis of the relation between professional news media and on-line news media appears as Chapter 13 in the book Netizens: On the History and Impact of Usenet and the Internet.]
crucial idea of each generation would no longer be written in the same material or in the same way, that the book of stone, so solid and durable, would give way to the book of paper, which was more solid and durable still.”

(Victor Hugo, Notre Dame de Paris)

I. Media-criticism

Will this kill that? Will the new on-line forms of discourse dethrone the professional news media?

The French writer Victor Hugo observed that the printed book rose to replace the cathedral and the church as the conveyor of important ideas in the fifteenth century. Will Usenet and other young on-line discussion forums develop to replace the current news media? Various people throughout society are currently discussing this question.

The role of modern journalism is being reconsidered in a variety of ways. There are journalists and media critics like the late Professor Christopher Lasch, who have challenged the fundamental premises of professional journalism. There are other journalists like Wall Street Journal reporter Jared Sandberg, who cover an on-line beat, and are learning quickly about the growing on-line public forums. These two approaches are beginning to converge to make it possible to understand the changes in the role of the media in our society brought about by the development of the Internet and Usenet.

Media critics like Christopher Lasch have established a theoretical foundation which makes it possible to critique the news media and challenge the current practice of this media. In “Journalism, Publicity, and the Lost Art of Argument”, Lasch argued:

“What democracy requires is public debate, and not information. Of course, it needs information, too, but the kind of information it needs can be generated only by vigorous popular debate.”

Applying his critique to the press, Lasch wrote:

“From these considerations it follows the job of the press is to encourage debate, not to supply the public with information. But as things now stand the press generates information in abundance, and nobody pays any attention.”

Lasch explained that more and more people are getting less and less interested in the press because, "Much of the press...now delivers an abundance of useless, indigestible information that nobody wants, most of which ends up as unread waste.”

Reporters like Jared Sandberg of the Wall Street Journal, on the other hand, recognize that more and more of the information which the public is interested in, is starting to come from people other than professional journalists. In an article about the April 1995 Oklahoma Federal building explosion, Sandberg writes:

“In times of crisis, the Internet has become the medium of choice for users to learn more about breaking news, often faster than many news organizations can deliver it.”

People curious and concerned about relatives and others present on the scene turned to the Net to find out timely information about survivors and to discuss the questions raised by the event. Soon after the explosion, it was reported and discussed live on IRC and in newsgroups on Usenet such as alt.current-events.amfb-explosion and elsewhere on-line. Sandberg noted that many logged onto the Internet to get news from first-hand observers rather than turning on the TV to CNN or comparable news sources.

Along with the broader strata of the population which has begun to report and discuss the news via the Internet and Usenet, a broader definition of who is a media critic is developing. Journalists and media critics like Martha Fitzsimon and Lawrence T. McGill present such a broader definition of media critics when they write, “Everyone who watches television, listens to a radio or reads...passes judgment on what they see, hear or read.”

Acknowledging the public’s discontent with the traditional forms of the media, they note that, “the evaluations of the media put forward by the public are grim and getting worse.”

Other journalists have written about public criticism of the news media. In his article, “Encounters On-Line”, Thomas Valovic recognizes some of the advantages inherent in the new on-line form of criticism. Unlike old criticism, the new type “fosters dialogue between reporters and readers.” He observes how this dialogue “can subject reporters to interrogations by experts that undermine journalists’ claim to speak with authority.”

Changes are taking place in the field of journalism, and these changes are apparent to some, but not all journalists and media critics. Tom Goldstein, Dean of University of California Berkeley Journalism School observes that change is occurring, but the results are not fully understood.
II. Examining the role of Internet/Usenet and the Press

There are discussions on-line about the role of the press and the role of on-line discussion forums. The debate is active, and there are those who believe the print press is here to stay, while others contend that interactive discussion forums are likely to replace the authority of the print news media. Those who argue for the dominance of the on-line media present impassioned arguments. Their comments are much more persuasive than those who defend the traditional role of the print media as something that is handy to read over breakfast or on the train. In a newsgroup thread discussing the future of print journalism, Gloria Stern stated:

“My experience is that I have garnered more information from the internet than I ever could from any newspaper. Topical or not, it has given me community that I never had before. I touch base with more informed kindred souls than any tonnage of paper could ever bring me.”

Regularly, people are commenting on how they have stopped reading newspapers. Even those who continue to read printed newspapers, note that Usenet has become one of the important sources for their news. For example, a user wrote:

“I do get the New York Times every day, and the Post and the Washington Times and the Wall Street Journal (along with about 100 other hard-copy publications), and I still find Usenet a valuable source of in-depth news reporting.”

More and more people on Usenet have announced their discontent with the traditional one-way media, often leading to their refusal to seriously read newspapers again. In a discussion about a Time magazine article about the Internet and Usenet, Elizabeth Fischer wrote:

“The point of the whole exercise is that for us, most of us, paper media is a dead issue (so to speak).”

In the same thread, Jim Zoes stated the challenge posed by the on-line media for reporters:

“This writer believes that you (the traditional press) face the same challenge that the monks in the monastery faced when Gutenberg started printing Bibles.”

Describing why the new media represents such a formidable foe Zoes continued:

“Your top-down model of journalism allows traditional media to control the debate, and even if you provide opportunity for opposing views, the editor *always* had the last word. In the new paradigm, not only do you not necessarily have the last word, you no longer even control the flow of the debate.”

He concludes with his understanding of the value of Usenet to society:

“The growth and acceptance of e-mail, coupled with discussion groups (Usenet) and mail lists provide for a ‘market place of ideas’ hitherto not possible since perhaps the days of the classic Athenians.”

Others present their views on a more personal level. One poster writes:

“I will not purchase another issue of Newsweek. I won’t even glance through their magazine if it’s lying around now given what a shoddy job they did on that article.”

Another explains:

“My husband brought [the article] home...for me to read and [I] said, ‘Where is that damn followup key? ARGH!’ I’ve pretty much quit reading mainstream media except when someone puts something in front of me or I’m riding the bus to work....”

These responses are just some of the recent examples of people voicing their discontent with the professional news media. The on-line forum provides a public way of sharing this discontent with others. It is in sharing ideas and understandings with others with similar views that grassroots efforts begin to attempt to change society.

While some netusers have stopped reading the professional news media, others are interested in influencing the media to more accurately portray the Net. Many are critical of the news media’s reporting of the Internet, and other events. Users of the Internet are interested in protecting the Internet. They do this by watch dogging politicians and journalists. Concern with the coverage of the Internet in the press comes from first-hand experience with the Internet. One netuser expressing such dissatisfaction writes:

“The net is a special problem for reporters, because bad reporting in other areas is protected by distance. If someone reports to the Times from Croatia, you’re not going to have a better source unless you’ve been there (imagine how many people in that part of the world could correct the reports we read). All points of Usenet are equidistant from the...
user and the reporter – we can check their accuracy at every move. And what do we notice? Not the parts that the reporter gets right, just the errors. And Usenet is such a complete culture that no reporter, absent some form of formal training or total immersion in the net, is going to get it all right.”

Another on-line critic writes:
“It’s scary when you actually are familiar with what a journalist is writing about. Kinda punches a whole bunch of holes in the ‘facts’. Unfortunately it’s been going on for a long time... we, the general viewing public, just aren’t up to speed on the majority of issues. That whole ‘faith in media’ thing. Yick. I can’t even trust the damn AP wire anymore after reading an enormous amount of total crap on it during the first few hours of the Oklahoma bombing.”

In Usenet’s formation of a community, that community has developed the self-awareness to respond to and reject an outside description of the Net. If the Net was just the telephone line and computer infrastructure making up a machine, that very machine couldn’t object and scold journalists for describing it as a pornography press or a bomb-production press. Wesley Howard believes that the critical on-line commentary is having a healthy effect on the press:
“The coverage has become more accurate and less sloppy in its coverage of the Net because it (the Net) has become more defined itself from a cultural point of view. Partly because of growth and partly because of what the media was saying fed debates and caused a firmer definition within itself.... This does not mean the print media was in any way responsible for the Net’s self definition, but was one influence of many.”

Another person, writing from Japan, believed that journalists should be more responsible, urging that “all journalists should be forced to have an e-mail address.” He explained:
“Journalists usually have a much bigger audience than their critics. I often feel a sense of helplessness in trying to counter the damage they cause when they abuse their privilege. Often it is impossible even to get the attention of the persons responsible for the lies and distortions.”

Usenet newsgroups and mailing lists provide a media where people are in control. People who are on-line understand the value of this control and are trying to articulate their understandings. Some of this discussion is being carried on on Usenet. Having the ability to control a mass media, also encourages people to try and affect other media. The proposal to require print journalists to make available an e-mail address is an example of how on-line users are trying to apply the lessons learned from the on-line media to change the print media.

III. People as Critics: The Role the Net is Playing and Will Play in the Future:

People on-line are excited, and this is not an exaggeration. The various discussion forums connected to the global computer communications network (or the Net) are the prototype for a new public form of communication. This new form of human communication will either supplement the current forms of News or replace them. One person on a newsgroup succinctly stated:
“The real news is right here. And it can’t get any newer because I watch it as it happens.”

The very concept of news is being reinvented as people come to realize that they can provide the news about the environment they live in; that people can contribute their real-life conditions and this information proves worthwhile for others. The post continued:
“As other segments of society come on-line, we will have less and less need for some commercially driven entity that gathers the news for me, filters it, and then delivers it to me, hoping fervently that I’ll find enough of interest to keep paying for it.”

Such sentiment represents a fundamental challenge to the professional creation and dissemination of news. The on-line discussion forums allow open and free discourse. Individuals outside of the traditional power structures are finding a forum in which to contribute, where those contributions are welcomed. Describing the importance of the open forum available on the Net, Dolores Dege wrote:
“The most important and eventually most powerful aspect of the net will be the effect(s) of having access to alternative viewpoints to the published and usually (although not always either intentionally or consciously) biased local news media. This access to differing ‘truths’ is similar to the communication revolution which occurred when the first printing presses made knowledge available to the common populace, instead of held in the tight fists of the clergy and ruling classes.”

This change in who makes the news is also
apparent to Keith Cowing:

“How one becomes a ‘provider’ and ‘receiver’ of information is being totally revamped. The status quo hasn’t quite noticed – yet – THIS is what is so interesting.”

While this openness also encourages different conspiracy theorists and crack-pots to write messages, their contributions are scrutinized as much as any other posting. This uncensored environment leads to a sorting out of mis-truths from thoughtful convictions. Many people on-line keep their wits about them, and seek to refute half-truths and lies. A post from Australia notes that it is common to post refutations of inaccurate posts:

“One of the good things about Usenet is the propensity of people to post refutations of false information that others have posted.”

As the on-line media is in the control of many people, no one person can come on-line and drastically alter the flow or quality of discussion. The multiplicity of ideas and opinions make Usenet and mailing lists the opposite of a free-for-all.

IV. Qualities of this new medium

A common assumption of the ethic of individualism is that the individual is in control and is the prime mover of society. Others believe that it’s not the individual who is in control, but that society is being controlled by people organized around the various large corporations that own so much of our society – whether those corporations are the media, manufacturers, etc. The global computer communications networks currently allow uncensored expression from the individual at a bottom rung of society. The grass-roots connection of people around the world and in local communities based on common interests is an important step in bringing people more control over their lives. Lisa Pease wrote in alt.journalism:

“There is nothing like finding a group of people who share your same interests and background knowledge. Some of my interests I didn’t know one person in a hundred that shared – and now I’ve met many. What makes it a community is ultimately in-person meetings.”

She continued on in her message to state why such connections and discussions are important:

“The net...requires no permissions, no groveling to authority, no editors to deal with – no one basically to say ‘no don’t say that.’ As a result – far more has been said here publicly than has probably been said in a hundred years about issues that really matter – political prisoners, democratic uprisings, exposure of disinformation – THIS is what makes the net more valuable than any other news source.”

Similar views are expressed by others about the power of the Internet to work in favor of people rather than commercial conglomerates:

“The internet is our last hope for a medium that will enable individuals to combat the overpowering influence of the commercial media to shape public opinion, voter attitudes, select candidates, influence legislation, etc...”

People are beginning to be empowered by the open communications the on-line media provides. This empowerment is beginning to lead towards more active involvement by people in the societal issues they care about.

V. The Pentium Story

In discussions about the future of the on-line media, people have observed how Usenet makes it possible to challenge the privileges inherent in the traditional news media. John Pike started a thread describing the challenge the Net presents to the former content providers:

“To me this is the really exciting opportunity for Usenet, namely that the professional content providers will be directly confronted with and by their audience. The prevailing info-structure privileges certain individuals by virtue of institutional affiliation. But cyberspace is a far more meritocratic environment – the free exchange of ideas can take place regardless of institutional affiliation.”

Pike continues by arguing that on-line forums are becoming a place where “news” is both made and reported, and thus traditional sources are often scooped. He writes:

“This has tremendously exciting possibilities for democratizing the info-structure, as the ‘official’ hard copy implementations are increasingly lagging cyberspace in breaking news.”

An example of news being made on-line occurred when Intel, the computer chip manufacturer, was forced to recall faulty Pentium chips because of the on-line pressure and the effect of that pressure on computer manufacturers such as IBM and Gateway. These companies put pressure on Intel because people using Usenet discovered problems with the Pentium. The on-line discussion led to people becoming active and getting the manufacturers of their
computers, and Intel to fix the problems.

In the article “On-Line Snits Fomenting Public Storms,” Wall Street Journal reporters Bart Ziegler and Jared Sandberg, commented:

“Some industry insiders say that had the Pentium flub occurred five years ago, before the Internet got hot and the media caught on, Intel might have escaped a public flogging and avoided a costly recall.”

Buried in the report is the acknowledgment that the traditional press would not have caught the defect in the Pentium chip, but that the on-line media forced the traditional media to respond. The original reporting about the problem was done in the Usenet newsgroup comp.sys.intel and further on-line discussion took place in that newsgroup and other newsgroups and on Internet mailing-lists. The Wall Street Journal reporters recognized their debt to news that people were posting on-line to come up with a story which dealt with a major computer company and with the real world role that Usenet played.

In another article in the Wall Street Journal, reporter Fara Warner focused on the impact of the on-line news on Intel. “[Intel] offered consumers a promise of reliability and quality, and now that promise has been called into question,” she writes quoting the CEO of a consulting firm.33 The people who did this questioning were the users of the computers with the faulty chips. Communicating about the problem on-line, these users were able to have an impact not otherwise possible. Ziegler and Sandberg noted that the discussions were on-line rather than in “traditional public forums like trade journals, newspapers or the electronic media.” On-line users were able to work together to deal with a problem, instead of depending on other forums traditionally associated with reporting dissatisfaction with consumer goods. After all of the criticisms, Intel had to replace faulty chips in order to keep their reputation viable. The Wall Street Journal, New York Times and other newspapers and magazines played second fiddle to what was happening on-line. In their article, Ziegler and Sandberg quote Dean Tom Goldstein: “It’s absolutely changing how journalism is practiced in ways that aren’t fully developed.” These journalists acknowledge that the field of journalism is changing as a result of the existence of the on-line complaints. The on-line connection of people is forming a large and important social force.

As a community where news is made, reported and discussed, Usenet has been a hotbed of more than just technical developments. Other late breaking stories have included the Church of Scientology and the suppression of speech. An Australian reporter, John Hilvert, commented on the value of being on-line:

“It [Usenet] can be a great source of leads about the mood of the Net. The recent GIF-Unisys-Compuserve row and the Intel Pentium bug are examples of Usenet taking an activist and educative role.”

Nevertheless, Hilvert, warned about the authenticity of information available on-line:

“However the risk is you can easily be spooked by stuff on the Net. Things have to be shaped, confirmed and tested off-line as well. One of the interesting side-effects of Usenet is that we have to work even harder to get a good story because, there is not much value-added in just summarizing a Usenet discussion.”

Though, it is hard to rely on any single piece of information, Usenet is not about ideas in a vacuum. Usenet is about discussion and discourse. Tom Kimball, in a Usenet post, writes about the value of a public Usenet discussion,

“I have great respect for the Usenet ideal of everyone having the chance to respond to the ideas of others and the resulting exchanges of information and clashes of ideas I think is of some value (despite the flame-war garbage that gets in the way).”

The great number and range of the unedited posts on Usenet brings up the question of whether editors are needed to deal with the amount of information. Discussing the need to take time to deal with the growing amount of information, a post on alt.internet.media-coverage explained,

“The difference being that for the first time in human history, the general populace has the ability to determine what it finds important, rather than relying on the whims of those who knew how to write, or controlled the printing presses. It means that we as individuals are going to have to deal with sifting through a lot of information on our own, but in the end I believe that we will all benefit from it.”

Such posts lead to the question of what is meant by the notion of the general populace and a popular press. The point is important as those who are on the Net make up but a small percentage of the total population of either the USA or the world. However, that on-line population of an estimated 27.5 million people make up a significant body of people con-
necting to each other on-line. The fast rate of growth also makes one take note of the trends and developments. Defining what is meant by ‘general populace and a popular press’ the post continues:

“By general populace, I mean those who can actually afford a computer, and a connection to the ‘net’, or have access to a public terminal. As computer prices go down, the amount of people who fit this description will increase. At any rate, comparing the 5-10 million people with Usenet access, to the handful who control the mass media shows that even in a nascent stage, Usenet is far more the ‘people’s voice’ than any media conglomerate could ever be.”

The comments from the last two people lead to asking whether or not the new technologies are helping the human species to evolve or to deal with the ever increasing amount of information. Computer pioneers like Norbert Wiener, J.C.R. Licklider and John Kemeny discussed the need for man-computer symbiosis to help humans deal with the growing problems of our times. The on-line discussion forums provide a new form of man-computer symbiosis. They are helpful intellectual exercises. It is healthy for society if all members think and make active use of their brains – and Usenet is conducive to thinking. It is not the answer to ask journalists to provide us with the answers, the objective truth of life. Even if someone’s life is busy, what happens when they come to depend on the opinions and summaries of others as their own? Usenet is helping to create a mass community which works communally to aid the individual. Usenet works via the active involvement and thoughtful contributions of each user. The Usenet software facilitates the creation of a community whose thought processes can accumulate and benefit the entire community. The creation of the book, and the printed book helped to increase the speed of the accumulation of ideas. Usenet now speeds up that process to help accumulate the thoughts of the moment. The resulting discussion seen on Usenet could not have been produced beforehand as the work of one individual. The bias or point of the view of any one individual is no longer presented as the whole truth.

Karl Krueger describes some of the value of Usenet in a posting to Usenet:

“Over time, Useneters get better at being parts of the Usenet matrix – because their *own* condensations support Usenet’s, and this helps other users. In a way, Usenet is a ‘meta-symbiont’ with each user – the user is a part of Usenet and benefits Usenet (with a few exceptions...), and Usenet includes the user and benefits him/her.”

Krueger points out how experienced Usenet users contribute to the Usenet community. He writes:

“As time increases normally, the experienced Usenet user uses Usenet to make himself more knowledgeable and successful. Experienced users also contribute back to Usenet, primarily in the forms of conveying knowledge (answering questions, compiling FAQs), conveying experience (being part of the environment a newbie interacts with), and protecting Usenet (upholding responsible and non-destructive use, canceling potentially damaging spam, fighting ‘newsgroup invasions’, etc.).”

As new users connect to Usenet, and learn from others, the Usenet Collective grows and becomes one person richer. Krueger continues:

“Provided that all users are willing to spend the minimal amount of effort to gain some basic Usenet experience then they can be added to this loop. In Usenet, old users gain their benefits from other old users, while simultaneously bringing new users into the old-users group to gain benefits.”

The collective body of people, assisted by the Usenet software, has grown larger than any individual newspaper. As people continue to connect to Usenet and other discussion forums, the collective global population will contribute back to the human community in this new form of news.

VI. Journalists and the Internet

Professional journalists are beginning to understand that the on-line discussion forums will change their field, though they may not fully understand what the changes will be. In posing the question: “What, if any, effect do Usenet News and mailing lists have on reporters and editors you are in contact with?”, several journalists responded. Some stated that Usenet and mailing lists are valuable information and opinion gathering tools which also help them to get in touch with experts, while others are either timid about the new technology or did not want to bother with yet another reporting tool. Several of the reporters stated that they do not participate in any discussion forums per se, but rather lurk in these areas and contact posters by e-mail who they feel will have valuable information for a story. Their main concern was that they might
waste time on-line trying to get information when there would only be a small amount of worthwhile material in a lot of waste. Lastly, one or two did not see any value in on-line discussion forums, and have stayed away from them after initial negative impressions.

These reporters were asked if they sensed any pressure to get Internet accounts or to connect to Usenet and mailing lists. Josh Quittner of *Time* Magazine said the pressure came from the publishing side, where publishers are looking for the development of new markets. John Verity of *Business Week* and Lorraine Goods of *Time Interactive* said editors are responding to interest about the Internet and want stories about it. Brock Meeks, an independent journalist, stated that the pressure comes from reporters such as himself who have been on-line for some time and have beaten other reporters to stories because of the power of on-line communications. Some reported that they understood that it was important to get on-line without knowing why. A few said there is no push to go on-line.

Asked whether it is important to be on-line, some did not see it as necessary, given that they are already connected to those they consider to be experts in their respective field without being on-line. Others felt the speed of e-mail helped to gather timely information for the stories they were working on. Farhon Memon of the *New York Post* compared today’s on-line forums to conferences because they make contacting experts much easier both in terms of time and place.

When asked about the best forms of reader feedback, a number of the journalists stated that letters to the editor and op-ed pages were helpful. One reporter noted that letters to the editor were not particularly heeded. E-mail was named as the next most important means for readers to send in commentary. Whether this commentary is listened to or not is another story. One reporter did suggest that the on-line criticism, correct or not, encourages journalists to do the best possible job.

When it came to the question of whether on-line discussion forums would ever replace newspapers, the journalists almost universally stated that each form has its own role to play. Quittner didn’t think traditional journalists would evolve into on-line discussion leaders. Such a job might emerge, but not as an additional responsibility of the regular journalist. Maia Szalavitz responded:

“The print media can’t beat on-line stuff for interactivity; on-line stuff can’t beat print journalism for organization, ease of portability and use at this point.”

Goods offered a similar analysis:

“An on-line news outfit can obviously do things that print cannot. However, there are certain things you can do with a newspaper that you can’t do on a computer (like read it on the subway on the way to work, or in the bathroom). Just as TV did not replace radio, computers will not replace newspapers. I do think, however, that the introduction of new media will have an effect on traditional media. What those effects will be, however, I don’t know.”

There is a growing trend of journalists coming on-line for various reasons. Coming on-line could mean one of several things. Some use the Net as a new information source, and some look for people to interview. Lastly, there are those who are actually joining the community or responding to their reading audience. A growing number of journalists are participating in such newsgroups as alt.internet .media-coverage, alt.journalism.criticism, alt.news-media, also in forums on some of the commercial on-line services and in on-line communities such as the Well, among other places. Reporters are entering the discussion and both asking for people’s suggestions on how to improve their coverage of the Internet and for remarks on their stories.

Newspapers and magazines are developing on-line counterparts of their print editions (e.g., *San Jose Mercury News, Business Week*) on commercial on-line services such as Prodigy and America On-Line, and are experimenting with new content differing from their print editions on the World Wide Web (WWW) (e.g., HotWired, Time On-Line, NandoNet). These on-line offerings sometimes provide another interface between journalists and readers. Message areas or public discussion boards are offered along with publicized e-mail addresses for e-mailing letters to the editor or particular journalists.

**VII. Conclusion**

Newspapers and magazines are a convenient form for dealing with information transfer. People have grown accustomed to reading newspapers and magazines wherever and whenever they please. The growing dissatisfaction with the print media is more with the content than with the form. There is a significant criticism that the current print media does
not allow for a dynamic response or follow-up to the articles in hand. One possible direction would be towards on-line distribution and home or on-site printing. This would allow for the convenience of the traditional newspaper and magazine form to be connected to the dynamic conversation that on-line Netnews allows. The reader could choose at what point in the conversation or how much of the discussion to make a part of the printed form. But this leaves out the element of interactivity. Still, it could be a temporary solution until the time when ubiquitous slate computers with mobile networks would allow the combination of a light, easy to handle screen, with a continuous connection into the Internet from anyplace.

Newspapers could continue to provide entertainment in the form of cross-word puzzles, comics, classified ads, and entertainment sections (e.g., entertainment, lifestyles, sports, fashion, gossip, reviews, coupons, and so on). However, the real challenge comes in what is traditionally known as news, or information and newly breaking events from around the world. Citizen, or now Netizen reporters are challenging the premise that authoritative professional reporters are the only possible reporters of the news. The news of the day is biased and opinionated no matter how many claims for objectivity exist in the world of the reporter. In addition, the choice of what becomes news is clearly subjective. Now that more people are gaining a voice on the open public electronic discussion forums, previously unheard “news” is being made available. The current professional news reporting is not really reporting the news, rather it is reporting the news as decided by a certain set of economic or political interests. Todd Masco contrasts the two contending forms of the news media,

“Free communication is essential to the proper functioning of an open, free society such as ours. In recent years, the functioning of this society has been impaired by the monolithic control of our means of communication and news gathering (through television and conglomerate-owned newspapers). This monolithic control allows issues to be talked about only really in terms that only the people who control the media and access to same can frame . . . Usenet, and News in general, changes this: it allows real debate on issues, allowing perspectives from all sides to be seen.”

Journalists may survive, but they will be secondary to the symbiosis that the combination of the Usenet software and computers with the Usenet community produces. Karl Krueger observes how the Usenet Collective is evolving to join man and machine into a news gathering, sorting and disseminating body. He writes:

“There is no need for Official Summarizers (a.k.a. journalists) on Usenet, because everyone does it – by cross-posting, following-up, forwarding relevant articles to other places, maintaining FTP archives and WWW indexes of Usenet articles (yes, FTP and WWW are Internet things, not Usenet things – but if Usenet articles are stored in them, the metaphor extends).”

He continues:

“Journalists will never replace software. The purpose of journalists is similar to scribes in medieval times: to provide an information service when there is insufficient technology or insufficient general skill at using it. I’m not insulting journalism; it is a respectable profession and useful. But you won’t *need* a journalist when you have a good enough newsreader/browser and know how to use it.”

These on-line commentators echo Victor Hugo’s description of how the printed book grew up to replace the authority that architecture had held in earlier times. Hugo writes,

“This was the presentiment that as human ideas changed their form they would change their mode of expression, that the crucial idea of each generation would no longer be written in the same material or in the same way, that the book of stone, so solid and durable, would give way to the book of paper, which was more solid and durable still.”

Today, similarly, the need for a broader, and more cooperative gathering and reporting of the news has helped to create the new on-line media that is gradually supplanting the traditional forms of journalism. Professional media critics writing in the Freedom Forum Media Studies Journal acknowledge that on-line critics and news gatherers are presenting a challenge to the professional news media that can lead to their overthrow when they write:

“News organizations can weather the blasts of professional media critics, but their credibility cannot survive if they lose the trust of the multitude of citizens critics throughout the United States.”

As more and more people come on-line, and realize the grassroots power of becoming a Netizen reporter, the professional news media must evolve a new role or will be increasingly marginalized.
The International Origins of the Internet and the Impact of this Framework on its Future.

by Ronda Hauben
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[Editor’s note: The following is a talk given at Columbia University on Nov. 4, 2004.]

The research I have been doing for the past 12 years is about the origin, development and social impact of the Internet. I want to propose that knowing something of the nature of the Internet, of its international origins and early vision and development can provide a useful perspective for looking at a process that is currently ongoing at the initiative of the United Nations.

I want to share some of my research about the original vision and the international origins of the Internet and the implications of this heritage on the Internet’s future. Just now, over the past two or more years, and continuing through November, 2005, there is a ongoing United Nations initiative in which the world’s governments are participating, along with NGO’s and corporate entities. Yet this high level activity, as Wired reports, “has been largely ignored by those not participating in it.” (Wendy Grossman, “Nations Plan for Net’s Future”, October 11, 2004)

This process is known as the World Summit on the Information Society (WSIS). After preparatory activities for almost two years, the first of two planned summits was held in Geneva, Switzerland in December 2003. Since that summit, a continuing series of meetings are scheduled to set the foundation for the second Summit which is planned to take place in Tunisia in November of 2005.

Heads of state of many nations, particularly developing nations came to the Geneva summit and spoke about the importance of the Internet to the people in their countries and to their present and
future economic and social development and well-being. The participants recognized that the Internet is an international network of networks, and that it has been built by a great deal of public and scientific effort and funding. The disagreement arises over the nature of the present and future management structure and processes for the governance of the Internet.

In 1998 the U.S. government, which had previously overseen the Internet’s infrastructure managed as a non-commercial, scientific and educational medium, made a decision to begin to transition it to a private sector entity which is called the Internet Corporation for Assigned Names and Numbers (ICANN).

In the WSIS process there has been a lot of contention over the form and processes of ICANN. The concern is that ICANN was constructed as a business and technical creation and that this process marginalized governments.

Another way of describing this disagreement is that there is a contest about whether the development and management of the Internet and its infrastructure should be left to the market to determine or set by the policies of governments.

Concern is being raised about what are the issues pertaining to Internet governance. Stimulating the spread of the Internet and who has access is one such issue. Others include safeguarding the Internet’s integrity, oversight of the distribution of Internet addresses and domain names, determining the nature of the public interest and how to protect that interest, etc.

At the core of this dispute is the question of what kinds of policy decisions need to be made about the Internet and determining the process by which they will be made.

The WSIS meetings include those who it is claimed have an interest in questions of Internet governance. These are called the “Stakeholders” and thus far include representatives from:

- governments
- civil society (NGO’s)
- private sector

Others are sometimes mentioned, such as the scientific community, or the academic community.

In looking back at the origins of the Internet, I feel it is helpful to start with the vision of JCR Licklider, a psychologist, who was invited to begin a research office within the U.S. Department of Defense in Oct 1962. Licklider called the office the Information Processing Techniques Office (IPTO).

Licklider was an experimental psychologist who had studied the brain. For his PhD thesis he did pioneering work mapping where sound is perceived in the brain of the cat. Licklider was also excited about the development of the computer and of its potential to further scientific research.

He was particularly interested in the potential of the computer as a communication device. He saw it as a means of helping to create a community of researchers and of making it possible to strengthen the education available to the whole society through access to the ever expanding world of information. He envisioned that increased social contact would become available via the computer and computer networks.

Licklider created a community of researchers that he called the Intergalactic Network. He had in mind a network of networks. Though it was too early to create such a network when he began at IPTO in 1962, he set a foundation that inspired the researchers that followed him. He returned briefly to head the IPTO from 1974-75 just at the time that the research on the Internet was being developed.

In a paper Licklider wrote with another researcher, Robert Taylor in 1968, Licklider outlined a vision for a network of networks. Licklider’s vision was of the creation and development of a human-computer information utility. For this to develop and be beneficial, everyone would have to have access. The network of networks would be global. It wouldn’t be just a collection of computers and of information that people could passively utilize. Rather his vision was of the creation of an on-line community of people, where users would be active participants and contributors to the evolving network and to its development. To Licklider, it was critical that the evolving network be built interactively.

Also Licklider believed that there would be a
need for the public to be involved in the considerations and decisions regarding network development. He recognized that there would be problems with pressure being put on government from other sectors of society and that active citizen participation would be needed to counter these pressures. Licklider, writes:

“. . . many public spirited individuals must study, model, discuss, analyze, argue, write, criticize, and work out each issue and each problem until they reach consensus or determine that none can be reached – at which point there may be occasion for voting.”

Licklider believed that those interested in the development of the global network he was proposing, would have to be active in considering and determining its future. He also advocated that the future of politics would require that people have access to computers to be involved in the process of government. Licklider writes:

“Computer power to the people is essential to the realization of a future in which most citizens are informed about, and interested and involved in the process of government.”

Licklider and other computer pioneers of the 1950s and 1960s were concerned with the public interest and how the computer and networking developments of the future would be maintained in the public interest. Licklider writes that it is important to not only seek to consider the public interest, but also to make it possible for the public to be involved in the decision making process:

“[Decisions] in the ‘public interest’ but also in the interest of giving the public itself the means to enter into the decision-making process that will shape their future.”

Through the 1960s and into the early 1970s the IPTO pioneered new and important computer technology like the time-sharing of computers and then the creation of packet switching and the ARPANET computer network. The research was written up in professional publications and widely distributed.

By the late 1960s and early 1970s it was recognized that there was widespread interest in developing computer networking in countries around the world. A conference was held in 1972 at the Hilton Hotel, in Washington DC from October 24-26. More than a thousand researchers from countries around the world attended and participated in the demonstration by U.S. researchers that packet switching technology was functional. The demonstration excited many of the researchers. Also, however, international participation was recognized as critical to the development of networking technology. “International participation is no mere adornment to the Conference,” the organizers wrote. “It is a primary means towards achieving a diversity of interest and viewpoint.”

At the conference, a group was formed of those working on networking developments in different countries. It was called the International Network Working Group (INWG).

The great interest worldwide in computer networking was stimulating, but also it presented a problem. To understand the nature of this problem, it is helpful to consider the fact that there were packet switching networks being developed in different countries. These included Cyclades in France, NPL in Great Britain, and ARPANET in the U.S. These networks were different technically and were under the ownership and control of different political and administrative entities. Yet networking researchers realized the importance of making it possible for these networks to be able to interconnect, to be able to communicate with each other. This can be articulated as the Multiple Network Problem.

There was the recognition that no one of these different networks could become an international network. There would need to be some means found to make communication possible across the boundaries of different networks.

Collaboration among the researchers continued, with a number of meetings and exchanges about how it would be possible to design and create a means to support communication across the boundaries of these diverse networks.

At a meeting in Sept 1973 at the University of Sussex, in Brighton, England, two U.S. researchers, Bob Kahn and Vinton Cerf presented a draft of a paper proposing a philosophy and design to make it possible to interconnect different networks. The basic principle was that the changes to make communication possible would not be required of the different networks, but of the packets of information that were traveling through the networks.

To have an idea of the concept they proposed it is helpful to look at a diagram to show what the design would make possible.

In the gateways, changes to the packets would be made to make it possible for them to go through the networks. Also the gateways would be used to
route the packets.

The philosophy and design for an Internet was officially published in a paper over 30 years ago, in May 1974. The paper is titled “A Protocol for Packet Network Intercommunication” by Vinton Cerf and Robert Kahn with thanks to others including several from the international network research community for their contributions and discussion.

Describing the process of creating the TCP/IP protocol, Cerf explains that the effort at developing the Internet protocols was international from its very beginnings. Peter Kirstein, a British researcher at the University College London (UCL) presented a paper in Sept 1975 at a workshop in Laxenberg, Austria, describing the international research process. This workshop was attended by an international group of researchers, including researchers from Eastern Europe. Kirstein reports on research to create the TCP/IP protocol being done by U.S. researchers, working with British researchers and Norwegian researchers. Here is the diagram that Kirstein presents showing the participation of U.S. researchers via the ARPANET, along with British researchers working at the University College London (UCL) and Norwegian researchers working at NORSAR.

Collaboration between the Norwegian, British and U.S. researchers continued, demonstrated by the research to create a satellite network, called SATNET. Later researchers from Italy and Germany became part of this work.

Describing this international collaboration, Bob Kahn writes:

“SATNET... was a broadcast satellite system. This is if you like an ETHERNET IN THE SKY with drops in Norway (actually routed via Sweden) and then the U.K., and later Germany and Italy.”

Networking continued to develop in the 1980s. Among the networking efforts were those known as Usenet (uucp), CSnet, NSFnet, FIDONET, BITNET, Internet (TCP/IP), and others.

By the early 1990s TCP/IP became the protocol adopted by networks around the world.
In this map you can see the areas of the world where TCP/IP networking was possible, the areas where there was access to BITNET but not the Internet and the areas there was only e-mail access via different networking possibilities like uucp, FIDONET or OSI (X.25), etc.

It is also in the early 1990s that my co-author of the book Netizens, Michael Hauben, did some pioneering on-line research as part of class projects in his studies at Columbia University. He explored where the networks could reach and what those who were on-line felt was the potential and the problems of the developing Internet.

In the process he discovered that there were people on-line who were excited by the fact that they would participate in spreading the evolving network and contributing so that it would be a helpful communication medium for others around the world. Michael saw these users as citizens of the net or what at the time was referred to as net.citizens

Shortening the term to ‘netizen,’ he identified and documented the emergence of a new form of citizenship, a form of global citizenship that is called netizenship.

Describing these on-line citizens, the netizens, Michael writes:

“They are people who understand that it takes effort and action on each and everyone’s part to make the Net a regenerative and vibrant community and resource. Netizens are people who decide to devote time and effort into making the Net, this new part of our world, a better place.” (Michael Hauben, 1995)

What are the implications of this background to the WSIS process? In October 1998, the U.S. government decided it needed to privatize the Internet’s infrastructure. It created ICANN, the Internet Corporation for Assigned Names and Numbers. ICANN provided only minimal input for governments in an official way or for Internet users. There have been many problems with the structure and functioning of ICANN and lots of criticism.

The WSIS process led to holding a Summit in Geneva in December 2003. A number of heads of state attended. Issues raised included: Affordable access available to all, what would be the role for Governments in Internet governance? What would be the role for others in Internet governance?

In February 2004 a workshop was held to try to determine the components of Internet governance. At the workshop there was a proposal for netizens to be involved in Internet governance, recommending that netizen involvement would make it possible to counter the self interest of corporations who were part of the Internet governance process. The following diagram was submitted by Izumi Aizo of Japan. It still shows only a minimal role for governments but it introduces a role for netizens which is in line with Licklider’s vision of the crucial nature of citizen participation in the network’s development.

On-line, there is a forum involved with the WSIS process. But few people who are involved
with WSIS seem to pay attention to it. However, a
comment on the forum seemed quite relevant to the
problems being raised. The contributor to the forum,
Safaa Moussa was from Egypt. Moussa, too, echoed
Licklider’s concerns, writing that the crucial issues of
Internet governance involve the issue of public access
and the issue of how to widen the scope of public
engagement in the decision making process.

In September 2004, a meeting was held in
Geneva. Many contributions to that meeting seemed
in line with the vision of Licklider expressed to guide
computer network development. But there was con-
tention, also. Summarizing the conflict that has
developed in the WSIS process, a representative of
Egypt, H. E. Dr. Tarek Kamal, explains that there are
two conflicting view points. One view is that Internet
governance involves primarily technical and operative
issues which can be best coordinated by technical
groups and business organizations (this is the view of
those in favor of ICANN). The other view pointed to
by Dr. Kamal is that technical resource management
and other policy matters concerning the Internet are
social and public questions needing international and
government participation.

At the Sept 2004 meeting, supporting this second
viewpoint, a member of the Brazil delegation, Jose
Marcos Nogueira Viana, proposed the need to create
an inter-governmental forum – a meeting place for
governments to discuss Internet related issues. Also
putting public interest into the debate, was Hans Falk
Hoffman, a representative from the international
scientific institution CERN. He described how the
scientific community would continue to try to connect
universities and therefore major cities to the global
network with sufficient bandwidth at affordable
prices. A representative from the Chinese delegation
Madam Hu Quiheng, explained how:

“The Internet is a resplendent achievement of
human civilization in the 20th century. And that
government has to play the essential role in Internet
governance...creating a favorable environment boosting Internet growth while protecting the public inter-
ests.”

I want to propose that this activity as part of the
WSIS process demonstrates the importance of under-
standing the fact that the Internet is international and
that there is a demand for an international manage-
ment process and structure.

Similarly, and perhaps even more important is
the need to understand how to determine the public
interest. In connection with this goal, I want to
propose the need to seriously consider whether the
goal of netizen empowerment is one of the important
policy issues to be injected into the WSIS process.
This would imply the need to provide means for the
on-line community to be able to be active partici-
pants in the WSIS process. In the on-line forum on
09 September 2004, Safaa Moussa wrote:

“This on-line forum constitutes an important
part of mobilizing efforts for the pursued effective
outcome. But, in view of the wide-ranging aspects
that Internet Governance covers, I believe it is duly
important to make it clearer the inclusion of on-line
contributions into the decision-making process.”

On-line interaction and feedback need to be seen
all along the decision-making and implementation
processes.

Another point I would like to underline is the
creation of on-line working groups to help integrate
and coordinate initiatives and efforts undertaken at
national regional and international levels.

(Safaa Moussa’s post can be seen at: http://
www.wsis-online.net/igov-forum/forums/message-
view?message_id=416031 )

The Tunis Summit will take place in November
2005. Will it be able to meet the challenges of the
continuing development and spread of the Internet?
There are promising signs that the public and inter-
national essence of the Internet as envisioned by JCR
Licklider which were so important in the origin and
development of the Internet are being taken up. But
will there be a means of welcoming the on-line
community, the community of netizens into the
WSIS process? Will there be a convergence of
netizen participation and defense of the public
essence of the Internet strong enough for the results
of the Tunis summit to be significant?

Tunis November 2005

?
[Editor’s note: In November 2005 there will be the final event of the United Nations initiative known as the World Summit on Information Society (WSIS). The following was posted on-line as part of a forum helping to prepare for the November 2005 event. We include this post because it helps clarify some of the issues. Saafa posted from Egypt. She also exchanged e-mail with Ronda Hauben. One of her messages follows her short post.]

**WSIS Post**
by Saafa Mousa
sfmoussa@aucegypt.edu

“Internet Governance covers different dimensions and wide-ranging issues, hence daunting challenges in implementation. I would like to underline, in this respect, the issue of public access and widening the scope of public engagement in decision-making processes.”

http://www.wsis-online.net/igov-form/forums/message-view?message_id=349586

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From: Saafa Mousa
To: Ronda Hauben
Subject: RE: about WSIS on-line forum

I would like to congratulate you on this Spring issue. It brought up very important and key issues on Internet Governance.

Referring to my posting in one of the WSIS on-line forums, that you quoted in your interesting magazine, I would like to underline the prime importance of on-line discussions and inputs to be taken into consideration as part of the decision-making process on issues related to the WSIS.

On-line interaction puts into effect the use of ICT as a tool for quicker, more inclusive contribution to any brainstorming mechanism or decision-making process. It widens the spectrum of participation and ideas involved, speeding up and enriching the debate.

The key issue here, when on-line forums are available, is to integrate on-line contribution into the WSIS participation process.

It should be noted, in this respect, that some experts, whose viewpoints would be valuable, do not have the time or the chance to be part of the official process. That is why, I would consider it imperative to have an all-inclusive mechanism making use of the interactive participation that the Internet provides.

with my Best Wishes

[Editor’s note: We have gathered some documents about the first successful international Usenet and e-mail connections between Europe and Asia and about getting the country code domain name for Viet Nam.]

**First Korean Post to the International Usenet**

From: Yoon Kim (yoonkim@kaist.UUCP)
Subject: The land of morning calm says hello.
Message-ID: <827@kaist.UUCP>
Article-I.D.: kaist.827
Newsgroups: net.news.newsite
Posted: Sat Apr 21 07:27:41 1984

After a long period of not being able to post news, we are finally introducing our self. We were linked to the Usenet since the December of 1983. Nice to say hi!

------------------------------------------------------------
Name of site?  kaist  
What the site is all about?  Department of Computer Science Korea Advanced Institute of Science and Technology Running 4.2BSD on VAX 11/780 mainly developing System Development Network (SDN) throughout Korea. And we will be the gateway to SDN.
Name of contact person at site:  
Prof. Kilnam Chon ...!hplabs!kaist!knchon  
Yoon W. Kim ...!hplabs!kaist!yoonkim
Mailing address of contact person:  
P.O. Box 150, Cheongryang, Seoul 131, Republic of Korea, phone number of contact person:  +82 2 966 1931 ext 3744, 4714.

Systems with whom mail & news articles are exchanged. Overseas links hplabs – we poll them 5 times weekly at 1200 baud UUCP. We only receive the following news groups on-line:

net.announce
net.bugs.4bsd
net.bugs.uucp net.dcom
net.lan  net.languages.st80
net.micro.68k net.micro.pc
net.news.adm net.news.sa
net.sources net.works

Domestic (SDN) links:

dacom – we poll them hourly/as needed at 1200 baud UUCP
ketri – we poll them hourly/as needed at 1200 baud UUCP
kiet – we poll them hourly/as needed at 1200 baud UUCP
snucom – we poll them hourly/as needed at 1200 baud UUCP

Comments.
The domestic links are connected via TCP/IP and UUCP. Welcome any contacts.

[Editor’s note: In October 2004, Ronda Hauben and Jay Hauben met Professor Werner Zorn in Berlin, Germany. They had heard that Zorn and Karlsruhe University in Germany were involved with the first e-mail connectivity between the People’s Republic of China and a foreign country. Zorn was happy to tell about the historic events in which he took part. He provided articles and papers documenting the early history of computer networking in China and between China and especially Germany. His story was very informative toward understanding the international origin and history of the Internet. What follows is some of the story Zorn shared and that is told in the documents.]

“Across the Great Wall”
The China-Germany E-mail Connection 1987-1994
by Jay Hauben
jrh@ais.org

In 1987 an e-mail connection was established between the People’s Republic of China and the Federal Republic of Germany. Many factors contributed to make that connection possible. The World Bank extends credit and investments to developing countries. In the early 1980s, it supported the import of computers for use in universities in China. At that time, export of computers from the U.S. to China was forbidden by the U.S. government. The German government also subscribed to the COCOM export rules but computers made by the German company Siemens met the criteria to be allowed export to China. In 1982, the World Bank Chinese University Development Project II was allotted $145 million. It used some of that money for the import into China of 19 Siemens BS2000 mainframe computers manufactured in Germany.

Werner Zorn, who would play a crucial role in the first China-Germany e-mail connection had experience with Siemens computers. He gained that experience in his work as Head of the Computing Center IRA (Informatik Rechnerabteilung) and Professor of Computer Science at Karlsruhe University, a major institute for education and research in western Germany. Zorn’s specialty was computer networks and performance analysis. Zorn was leader of the project which worked in 1983 and 1984 to make the first German e-mail connection with the U.S. Computer Science Network (CSNET). Also, in 1983, he began a friendly and collaborative relation with Professor Wang Yuen Fung (Yunfeng Wang), Senior Advisor of the Chinese Institute of Computer Applications (ICA) in Beijing. That was when they organized the first Chinese Siemens Computer User Conference (CASCO – Symposium ’83) which took place in September of that year. The ICA which was under the Chinese State Commission of Machinery Industry was to play the crucial role on the Chinese side in establishing and maintaining the China-Germany e-mail connectivity from 1987-1994.

At the first CASCO symposium in Beijing, Zorn gave a keynote speech on the German Research Network (DFN) project. He also led a seminar on the same topic. One of the Chinese interpreters challenged Zorn, remarking that lecturing was not enough. Would Zorn also do something more for China? That comment planted a seed that grew as the warmth and friendship developed between the German visitors and their Chinese hosts. They should try to do something together. Professor Wang encouraged a Chinese-German computer network collaboration.

The preparatory work for a China-Germany e-mail connection began a few months after the Germany-U.S. CSNET connectivity had been established. The Siemens BS2000 was to be the computer
at ICA available for use for the e-mail connection. It was hoped that the China-Germany e-mail connection would be a step toward connecting China with the growing CSNET, a network begun in the U.S. in 1980 to provide e-mail connections among university computer science departments. To connect to CSNET, a computer would need particular communication functionality as part of its operating system. The specifications or protocols describing that functionality for CSNET were the CSNET/PMDF transport protocols. This PMDF had not yet been implemented in the Siemens BS2000 operating system. In late 1984, Zorn decided to undertake this task together with his students but only as a background job. Including the lower levels, it took at least two years to complete. The work was financially supported after November 1985 by the government of the West German state of Baden-Wuerttemberg, under Prime Minister Lothar Spaeth.

CSNET e-mail traffic to and from Germany was routed using the X.25 lower level protocols. The X.25 protocols were the result of an effort to create a universal and global packet-switched network on what was then the bit-error prone analog telephone system. Much of the X.25 system is a description of the rigorous error correction needed to achieve this. In 1985, there was no physical path to carry X.25 e-mail traffic between China and Germany. To have such a path, telephone lines with switches that could route X.25 e-mail traffic were needed. China had begun to develop a network of such switches for internal X.25. So had Germany. X.25 e-mail traffic could be transported within China and within Germany. But there was no X.25 link between them. With the help of the PKTELCOM data network administered by the Beijing Telecommunications Administration, the Karlsruhe team made contact with the Italian carrier Italcable which had some leased lines between China and Italy. Italcable agreed to open its switches to route the anticipated X.25 e-mail traffic between China and Germany. Italcable was able to open its switches on Aug. 26 1986. From that day on, reliable remote computer-to-computer dialogue was available between Karlsruhe University and ICA through PKTELCOM. This channel would make possible the communication necessary one year later during the implementation phase of the China-Germany e-mail connection. Also, as soon as the computer scientists at ICA and Karlsruhe could implement X.25, PMDF, and other protocols on the Siemens BS2000 computer at ICA in Beijing, the China-Germany connection would have an X.25 route through Italy.

In late summer 1987, Zorn was in Beijing for the third CASCO conference where he gave the keynote address on “Computer Networks”. But also he was there to work with the staff of the ICA to set up the first e-mail connectivity between China and Germany. His team at Karlsruhe University had succeeded in getting the PMDF protocols to work on their Siemens BS2000 computer. In a little over two weeks, September 4 to 20, 1987, assisted by the staff of ICA, Zorn with his team implemented within the operating system of the ICA Siemens 7760/BS2000 computer the necessary protocols and installed the necessary communications equipment to make possible e-mail connectivity with Karlsruhe. For the lower three OSI layers, X.25 with PAD access over telephone lines were used. For the higher layers, the Karlsruhe BS2000/PMDF implementation of the CSNET protocols was used. On September 14, 1987, Professor Zorn and the ICA staff achieved the breakthrough they needed, host-to-host connectivity with Karlsruhe University. Zorn was able then to leave half of his team in Beijing to work with their Chinese colleagues to finish the job.

Before Zorn left, the joint German and Chinese team composed an e-mail message with the subject line, "First Electronic Mail from China to Germany". The message began in German and English, “Ueber die Grosse Mauer erreichen wie alle Ecken der Welt” "Across the Great Wall we can reach every corner in the world." The message, with cc:s to Lawrence Landweber, David Farber, Dennis Jennings, and to themselves was signed by Professor Werner Zorn for the University of Karlsruhe Computer Science Department (Informatik Rechnerabteilung) and Professor Wang Yuen Fung for the ICA. Eleven coworkers are also listed as signatories, Michael Finken, Stefan Paulisch, Michael Rotert, Gerhard Wacker and Hans Lackner on the Karlsruhe side and Dr. Li Cheng Chiung, Qiu Lei Nan, Ruan Ren Cheng, Wei Bao Xian, Zhu Jiang and Zhao Li Hua on the ICA side, suggesting the complexity of the task. Zorn mentioned Dr. Li Cheng Chiung, in particular, as playing an important role as the Director of the ICA Computing Center. Successful connectivity was achieved in a few more days. On September 20, 1987, the first e-mail message, the one composed on September 14, could actually be
sent to the VAX 11/750 computer at Karlsruhe.

![Figure 11](http://www.internetdigital.org/image/firstemail.jpg)

The transmission of this first e-mail message went over an X.25 connection. At ICA, the sender dialed using a 300 baud modem to one of the ports of the PKTELCOM Beijing X.25 PAD, located at the Beijing PTT. PKTELCOM Beijing was connected over a satellite link to ITAPAC, which was the X.25 packet network of Italy. From there the message was sent via a gateway to the German X.25 network, DATEX-P, to be delivered to the Karlsruhe Siemens host. The Siemens host in Karlsruhe was connected via the Karlsruhe local area network with a VAX 11/750. That computer “irau11.germany.csnet” acted as the central CSNET node for Germany. It polled the CSNET relay in Boston several times a day. Thus the CSNET node in Beijing was, with that first e-mail message, fully integrated into CSNET and via CSNET to the rest of the e-mail world. The official status was however only experimental. At that time the node-name was "beijing", so the simplest address from Karlsruhe to Beijing was li@beijing. From then on, the Beijing node normally tried to connect with Karlsruhe once a day. Sometimes there was a delay due to power off and other failures in between. Also, there was often some noise on the line.

With this e-mail connection, the first step was taken for the people of China to begin online communication with people around the world.

E-mail connectivity between China and Germany was only the necessary technical precondition for an e-mail service. Worldwide reachability was already achieved and operational on Sept. 20, 1987. What was missing was the official approval of the U.S. authorities that funded CSNET. The U.S. National Science Foundation (NSF) was the umbrella institution for all CSNET networking within the U.S. and also abroad at that time. Immediately after the technical connectivity was achieved, Zorn worked with Wang to win acceptance from the NSF for worldwide e-mail traffic to and from China. With the help of Lawrence Landweber, the Chairman of the CSNET project, and support from Dave Farber and Ira Fuchs, acceptance by the NSF was achieved less than two months later. On November 8, 1987, in a letter to the executive committees of CSNET and BITNET, Stephen Wolff, Director of the NSF Division of Networking and Communications Research and Infrastructure welcomed the CSNET e-mail connectivity with China. This letter was the official political approval, of what technically was already implemented.

![Figure 12](http://www.internetdigital.org/image/firstemail.jpg)
Without Wolff’s letter, the China-Germany e-mail connection would have been vulnerable to a cutoff if the NSF decided to deny forwarding of e-mail messages to and from ICA in Beijing. Zorn considers November 8, 1987 as the time China became officially connected with the rest of the world via the CSNET e-mail system. E-mail received from China at Karlsruhe would be relayed from there to whichever host worldwide it was addressed. And the reverse, any host worldwide could send mail to ICA in Beijing and it would be relayed from there to users of the China Academic Net (CANET) throughout China as well as to remote dialogue users in other Chinese institutions outside CANET. The international computer science community and Chinese students abroad who learned of this connectivity answered with their warm congratulations.

Still these were small steps. Even with the support of the Chinese State Science and Technology Commission (SSTC), hardly any Chinese institution and no individual scientist could afford to send or receive e-mail messages to or from abroad. That was because X.25 for international traffic increased in cost as the volume of e-mail traffic increased. The cost on the Chinese side included charges for every message received as well as sent. Zorn estimated that longer e-mail messages could cost a professor the equivalent of a whole month’s salary. The charges, typically $2000 to $5,000 per month paid by each side were more of a burden for the Chinese side than the German side. E-mail usage was thus severely restricted.

But for the five years during which expensive e-mail connectivity was the only network connectivity that could reach the rest of the world, China prepared itself to truly join the Internet.

In November 1990, the ICA registered the .CN country code domain name for China, again with crucial help from Zorn and Karlsruhe University. Qian Tianbai, an ICA Engineer was appointed as the Administrative Contact for .CN on the Chinese side. During the following four years, the university network center in Karlsruhe ran the primary domain name server for .CN on their irau1.ira.uka.de VAX 3500. The domain name service was fully operational in January 1991. From then on e-mail service was available in and to and from China with China’s own domain name.

With encouragement from the Chinese government, knowledge and understanding of international computer networking was spreading in China, especially in the scientific and computer communities. The Institute for High Energy Physics (IHEP) belonging to the Chinese Academy of Science opened an e-mail connection in 1989 with its partner in the U.S., the Stanford Linear Accelerator Center (SLAC) in California. Message Handling Systems (MHS) were set up in 1990 between the German Research Network (DFN) and the Chinese Research Network (CRN) and between the Beijing Tsinghua University Network (TUNET) and its partner in Canada at the University of British Columbia (UBC). Also, CHINAPAC an X.25 public telephone infrastructure was developed and used for e-mail exchanged within China.

The e-mail-only phase of connectivity between China and the rest of the world through Karlsruhe in Germany came to an end in 1994. That is when IHEP worked together with SLAC to take the next big step in connectivity between the people of China and the people of the world. On May 17, 1994, IHEP and SLAC established a full TCP/IP connection between China and the U.S. The use of the TCP/IP protocols allows data packets to take independent paths which meant the cost for e-mail could come down and file transfer (FTP) and remote logon (Telnet) would now be available. That connectivity opened the Internet to China and China to the Internet.

Some of the story of the Internet in China after 1994 is told online at a number of web sites. In 2004 was the Tenth Anniversary of TCP/IP connectivity. In early 2005, it was estimated that there were at least 100 million Internet users in China and Internet use was growing at perhaps 30% a year. There was a dynamic netizens movement developing. All this connectivity began with the first e-mail message to leave China. It can only make computer network pioneers like Wang Yuen Fung, Werner Zorn, and Li Cheng Chiung proud of the early e-mail connection they opened and celebrated by any of us who respect the progress the Internet represents for human society.

The author wants to thank Werner Zorn in Germany, without whom many of the details and this story would have remained unknown to him. In many ways he is a co-author. I thank him and Dr. Li Cheng Chiung in China for encouragement to tell this story. They are keeping the pioneer spirit alive.

1. COCOM, the Coordinating Committee for Multilateral Export Controls, was established during the Cold War to put an
embargo on Western exports to the Socialist countries. It established multilateral export controls for strategic and military goods/materiel and technologies to proscribed destinations.

2. For over 30 years, Werner Zorn was affiliated with Karlsruhe University in Karlsruhe, Germany. Today he is a professor of Communications Systems at the Hasso-Plattner Institute (www.hpi.uni-potsdam.de) at the University of Potsdam near Berlin. The papers he gave the author include, “Wie China mit den internationalen Rechnernetzen verbunden wurde” In: PK – Praxis der Informationsverarbeitung und Kommunikation 11 (1988), No. 1 pages 22-29, and “Die Entwicklun des Internet in China” written with Qian Tianbai, June, 1998. See also, http://www.cnnic.net.cn/html/Dir/2004/06/21/2349.htm

3. When Karlsruhe University joined CSNET in July 1984, Werner Zorn was appointed the Administrative Liaison. At that time, Karlsruhe University was one of two gateways between CSNET and European research networks. (see CSNET NEWS Summer 1984, No 5, pages 5 and 6). His e-mail address on CSNET was zorn@germany.

4. The Institute of Computer Applications was located at the Beijing Institute of Technology (BIT). It was created to provide data processing and computer services to small and medium organizations that could not afford their own computer installations. The ICA became a foremost computer networking center. From 1987 to 1994 it was the hub for CESNET e-mail exchange between China and the rest of the world.

5. CASCO- Chinesische Anwender von Siemens Computern.

6. CSNET was the result of a proposal in 1979 submitted by Lawrence Landweber at the University of Wisconsin-Madison in the U.S. to make computer network connections among U.S. and other university computer science departments. It started as a simple telephone-based e-mail relay network which became known as PhoneNet. In February, 1984, Israel became the first international node on the CSNET, soon followed by Korea, Australia, Canada, France, Germany, and Japan.


8. A PAD is a device that receives data from one or more terminals, assembles the data into packets and sends the data packets out to the hosts it serves. It can do the reverse, receiving data packets from network hosts, it can translate them into character streams that can be displayed at terminals.

9. When Zorn read the above article he wrote to me about Lawrence Landweber, "Without his everlasting support from 1984 and after, the whole work would not have been possible." Zorn also wrote that the e-mail connection project was strongly supported by many leading network people worldwide. He named, besides Landweber, Dave Farber, Ira Fuchs, Richard Mandelbaum and Stephen Wolff in the U.S., Wang in China and for example Dennis Jennings in the U.S. and Daniel Karrenberg in the Netherlands who attended the first CANET conference in Beijing in March 1988 and Kilnam Chon in Korea who was active in networking in the Asia/Pacific Rim region. (email messages April 28 and May 18, 2005).

10. For computer networking activity, ICA was financially better off than were the Chinese universities because ICA was funded by the Ministry of Machinery Industry while the universities were funded by the Ministry of Education which could not distribute to each university as much money as ICA received.

11. Qian Tianbai is sometime given credit for the first e-mail message from China to Germany. (See for example http://202.84.17.11/english/china_abc/internet.htm.) This does not appear to be correct. Dr. Li Cheng Chiung who was the director of the ICA from 1980 to 1990 writes that Qian Tianbai was an Engineer at the ICA from 1980 to 1998 but that he was in the U.S. studying at the CST Company for the whole of the year in 1987 including when the first e-mail message was sent. He includes that Mr. Qian was a good engineer who joined the CANET project in 1990 and was made a Senior Engineer in 1993 (e-mail messages to the author May 10, May 11, and May 17, 2005). Online references indicate that Qian Tianbai was a Vice-Chief Engineer at ICA in 1992. Werner Zorn writes that his e-mail contact with Qian Tianbai started not before 1990 (e-mail message to the author May 3, 2005). It can be noted that in the first e-mail message from China to Germany (see above), Qian Tianbai does not appear among the 13 signatories. Sadly, Qian Tianbai died of a sudden heart attack on May 8, 1998.


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**Domain Name for Viet Nam**

(See http://www.apng.org/xoops/archives/vietnam .net.description.txt)

From chon@cosmos.kaiist.ac.kr Mon Sep 14 1992
Return-Path: <chon@cosmos.kaiist.ac.kr>
Received: from cosmos.kaiist.ac.kr by buddle.kaiist.ac.kr (4.1/SMI-4.1) id AA04122; Mon, 14 Sep 92 10:44:35 KDT
Errors-To: Postmaster@cosmos.kaiist.ac.kr
Received: by cosmos.kaiist.ac.kr (4.1/SMI-4.1)
Kilnam,
Hello from Hanoi! Within a common project between IOI-Hanoi (Institute of Informatics Prof. Khang) and Xlink Karlsruhe we have just set up an experimental IP connection. In order to establish an e-mail service appropriately the definition of the top level domain “vn” for Vietnam is needed. Am I right, that this falls into your responsibility within apccirn? From the Xlink side we can offer to operate as the primary DNS. Could you post me a message how you ‘ld like to proceed!? Steve Goldstein whom I asked in Kobe had apparently no objections but I’ve just now contacted him again as we are a good step further. I’ll stay in Hanoi until Sept 16. and would be lucky to hear from you.
Best Regards, Werner

----- Forwarded message # 1:

From zorn@ira.uka.de Thu Sep 10 1992
Return-Path: <zorn@ira.uka.de>
Received: from kum.kaist.ac.kr by cosmos.kaist.ac.kr (4.1/SMI-4.1)
id AA14397; Thu, 10 Sep 92 18:01:49 KST
Errors-To: Postmaster@cosmos.kaist.ac.kr
Received: from iraun1.ira.uka.de by kum.kaist.ac.kr (4.1/KUM-0.1)
id AA14017; Thu, 10 Sep 92 18:03:58 KST
Message-Id:
<9209100903.AA14017@kum.kaist.ac.kr>
Received: from ira.uka.de by iraun1.ira.uka.de with
SMTP (PP)
id <09090-0@iraun1.ira.uka.de>; Thu, 10 Sep 1992
Date: Thu, 10 Sep 92 11:04:25 MET DST
From: “Prof. Dr. W. Zorn” <zorn@ira.uka.de>
To: chon@cosmos.kaist.ac.kr
Cc: zorn@ira.uka.de, rotert@ira.uka.de, nipper@ira.uka.de, ioi@ira.uka.de
Subject: Domain “VN”
Status: OR

Kilnam,
Enclosed you get the replies from Steve and Larry. What is Apccirn going to do on behalf of the “vn” registration? Do we have to coordinate something between you and Steve?
Waiting for your message with best Regards
Werner
Dear Scott,

Please send Domain Registration Templates to Prof. Zorn to enable him to assist in setting up a connection from Hanoi to Karlsruhe.

It should be noted that the United States prohibits our trading with Viet Nam. Therefore, no Internet connections to the United States from Viet Nam will be permitted. However, this does not prohibit the registering of an Internet domain for Viet Nam.

Thanks, Steve G.

------- Forwarded Message

Date: Tue, 8 Sep 92 6:53:59 MET DST
From: “Prof. Dr. W. Zorn” <zorn@ira.uka.de>
To: sgoldste@cise.cise.nsf.gov
Cc: zorn@ira.uka.de, nipper@ira.uka.de, rotert@ira.uka.de
Subject: Domain “vn” ?

Steve,
Hello from Hanoi! I am in the institute of Prof Khang for 2 weeks and we just now set up a connection from Hanoi to Karlsruhe that allows us to establish an e-mail service. In order to administrate that properly we should define the domain “vn” officially. Could/would you help us?
Many Regards, Werner

------ End of Forwarded Message

------ Forwarded message # 2:

Received: from ira1.ira.uka.de by i32fs2.ira.uka.de id ab28940; 9 Sep 92 18:31 MET DST
Received: from parmesan.cs.wisc.edu by ira1.ira.uka.de with SMTP (PP)
id <23954-0@ira1.ira.uka.de>; Wed, 9 Sep 92 11:28:27 -0500
From: “L.H. Landweber” <lhl@cs.wisc.edu>
Message-Id:
<9209091628.AA24133@parmesan.cs.wisc.edu>
Received: by parmesan.cs.wisc.edu; Wed, 9 Sep 92 To: zorn@ira.uka.de
Subject: Re: Hello from Hanoi!

Werner the link to Viet Nam sounds great. My understanding is that nobody objects these days to links involving just e-mail. Even Cuba now has a registered domain.

Steve is the person to help with this. Please keep me informed. I will check with him separately to see if there are any problems.

regards, Larry

----- End of forwarded messages

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From ioi@ira.uka.de Thu Sep 10 19:59:48 1992
Return-Path: <ioi@ira.uka.de>
Received: from kum.kais.ts.ac.kr by cosmos.kaist.ac.kr (4.1/SMI-4.1)
id AA14657; Thu, 10 Sep 92 19:59:46 KST
Errors-To: Postmaster@cosmos.kais.ac.kr
Received: from ira1.ira.uka.de by kum.kais.ac.kr (4.1/KUM-0.1)
id AA14661; Thu, 10 Sep 92 20:01:53 KST
Message-Id: <9209101101.AA14661@kum.kais.ac.kr>

Dear Professor Kilnam Chon,
this is the first message being sent to you from ioi-Hanoi through our just newly established network connection to Karlsruhe. We would be very happy and thankful to you, if you could support us for the further development of our network here in Viet Nam. We would especially interested in setting up a direct link between Hanoi and Seoul as well as with other locations in the Asian Pacific Rim. We would be very happy getting a reply message from you!

Kindest Regards, Bach Hung Khang

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Page 31
I did some search for you about the first usage of “netizen” in the media. There is a search engine for newspapers:

http://www.kinds.or.kr/ (Korean)

This search engine covers 8 major newspapers and that’s almost of all since local newspapers are not that popular in Korea. Here’s the first 10 results.

<table>
<thead>
<tr>
<th>Date</th>
<th>Newspaper</th>
<th>Section</th>
<th>Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994-12-20</td>
<td>Donga</td>
<td>IT/Science</td>
<td>E-Vote for Presidential Election? – E-Democracy is coming</td>
<td>Mentioning a touch screen-based e-voting system adopted in Michigan’s local election. Emphasizing “netizens” or their matured culture are prerequisite for introducing such system</td>
</tr>
<tr>
<td>1995-01-10</td>
<td>Donga</td>
<td>IT/Science</td>
<td>Internet and IT Revolution</td>
<td>Introducing IBM’s internet site and net-marketing. Mentions that 20,000 companies are using internet world-wide, and 80 of them are in Korea.</td>
</tr>
<tr>
<td>1995-02-13</td>
<td>Seoul</td>
<td>IT/Science</td>
<td>Cyberspace, Internet and Net-marketing</td>
<td>Introducing basic concepts about internet, hacking, cyberspace, net-marketing, and netizen</td>
</tr>
<tr>
<td>1995-03-30</td>
<td>Kukmin</td>
<td>Columns</td>
<td>Computer-illiterate and Netizen</td>
<td>The author is a poet who doesn’t have much knowledge in computer. He’s concerned on being a neo-don-quixote as he has hard time in keeping things up like young netizens.</td>
</tr>
<tr>
<td>1995-04-09</td>
<td>Donga</td>
<td>Foreign relationships</td>
<td>Korea-Japan Academic Symposium for Detente</td>
<td>Korea hasn’t been in good terms with her neighbor, Japan, even 50 years after her liberation from Japanese colon. Someone in this symposium maintained that “netizen” or internet could have a role of a bridge between two nations.</td>
</tr>
<tr>
<td>1995-04-12</td>
<td>Segye</td>
<td>IT/Science</td>
<td>Companies are hungering for Virtual Market Information about the Spring COMDEX in Atlanta can be accessible through internet. This article introduces mosaic and says someone who uses mosaic for business information can be viewed as a typical “netizen”.</td>
<td></td>
</tr>
<tr>
<td>1995-04-15</td>
<td>Hankyore</td>
<td>Column</td>
<td>Playboy in the Internet</td>
<td>The author mentions his experience with accessing Playboy and Penthouse through Internet, and maintains his opinion against censorship.</td>
</tr>
<tr>
<td>1995-04-19</td>
<td>Chosun</td>
<td>N/A</td>
<td>Public Database Not being Used Sufficiently Introducing public database/service projects by local governments. Emphasizing they are Virtual spaces for e-democracy by the netizens. Also mentioned Information Superhighway in the U.S. The author is a professor teaching instructional technology in Hanyang University, Seoul.</td>
<td></td>
</tr>
</tbody>
</table>
9. 1995-05-02
Hankook
IT/Science
Digital Advertisement
Mentioning that internet advertisements targeting netizens are introduced for the first time in Korea.

10. 1995-05-17
Segye
IT/Science
Mr. Netizen, Dr. Taeha Park
Dr. Park is the first PhD in Korea who did research on internet community & search. He recently got his degree in KAIST (http://www.kaist.edu/) receiving comments from a U.S. professor in Colorado through internet, married with a girl he met in the cyberspace, has his own homepage in the internet, and works for the first internet-oriented company in Korea.

Almost every article mentions that “netizen” is a recently-coined word with “network + citizen”. Hope this helps you in understanding from when they started to use the word “netizen”. Thanks.

**XXII International Congress of History of Science**
**SYMPOSIUM SC9 ICOHTEC**
**Technology**

**Computer Networks, the Internet and the Netizens:**
**Their Impact on Science and Society**

**Introduction:**

The development of computer networks, the Internet and the emergence of the netizens are topics particularly relevant to the 22nd International Congress of History of Science, and the topic of the Congress: “Diversity and globalization: diffusion of science and technology throughout history.”

This symposium will focus on the history of the development of computer networks, the linking of these networks via the creation of the Internet, and the emergence of the active participants in these net-works, the netizens (i.e., net.citizens). Our symposium will include papers about the scientific development of networking technology, as well as the impact of the Internet on science and on society.

The Internet will continue to develop and impact society, but already the Internet has a history, the as yet untold history of its development as a science and a technology. Also, emerging with the Internet has been the netizen. The symposium will consider the historical organizations and threads which brought forth the Internet and the netizen, especially international and cross-ideological efforts. Included will be Eastern European computer networking developments.

The Internet has made it possible to link diverse networks around the world, and the citizens of these networks, into a global public sphere populated by citizens of the world, by netizens. This development is a product of scientific/technical research, of research in resource sharing and in interactive communication on both technical and social levels. It is also a product of the activity of the users and of the netizens. The emergence of netizens is one of the spectacular achievements of the creation and development of the Internet, an achievement that as yet has received little attention. The netizens movement in China is an important component of the international development of netizens, and it is especially fitting to devote a symposium to our topic as part of the ICHS in Beijing in July 2005.

Organizers: Frank Dittmann (Germany) and Ronda Hauben (USA)

First Session:
Chair: Jay Hauben
Introduction and Welcome to the Symposium: Frank Dittmann

1. Ronda Hauben (USA)
   The International and Scientific Origins of the Internet and the Emergence of the Netizen
2. Leszek Jesien (Poland) along with Krzysztof Gurna (Poland)
   Netizens and the Internet Against the Politics and Policies of Integrating and Expanding Europe
3. Li Xiguang (China) along with Guo Xiaoke (China) and Xu Yong (China)
   The Impact of New Communication Technologies on Chinese Press Politics
4. Louis Pouzin (France)
   Netizens in the Cogwheels of WSIS: Open and Hidden Strategies for Progress

Second Session
Chair: Ronda Hauben

1. Frank Dittmann (Germany)
   The Beginning of Network Technology in COMECOM
2. Klaus Fuchs-Kittowski (Germany)
   The Impact of Computer Networks on the Culture of Knowledge Work and Scientific Work
3. Wolfgang Hofkirchner (Austria)
   Sustainable Information Society
4. Jay Hauben (USA)
   Across an Ideological Divide: IIASA and IIASA Net

Third Session
Chair: Frank Dittmann

1. Myung Shin Kim (Korea)
   The Korean Netizens Movement
2. Boldur E. Barbat (Romania)
   The Netizens, the Internet and Stigmergy: From Metaphor to Impact
3. Viviane Serfaty (France)
   Activism and On-line Networking in the USA
4. Karsten Weber (Germany)
   Open Source and Free Software: Historical and Sociological Aspects of Non-Proprietary Software

Summing up of Symposium: Ronda Hauben