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The Internet of the future – 33 visions

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Once upon a time, there was a fairy tale – the sort we know from our childhood, not from the hard world of business. This was a fairy tale about young, handsome companies which collected heaps of fairy gold for brilliant ideas and dazzling charts. Their goal was to finance unlimited growth, technology and marketing budgets that traditional advertising directors could only dream of. In just a little while – or so they told us from the USA – there would be a flood of profits that the employees could surf on, quickly making them millionaires. The companies were staffed by young people of both genders, full of energy and entrepreneurial spirit, working day and night in offices designed like communes for a shared goal – not least because they would have a piece of the action if the company turned into another Microsoft, Cisco or Yahoo. Instead of canteen food, the boss democratically ordered pizza for all, if people were hungry and all the jelly beans were gone. Instead of gray suits and muted ties, everybody wore open shirts and T-shirts. Company parties were casual and great fun, as everybody was on first-name terms and it was hard to separate business from private life. And nobody talked about overtime, because that would have meant knowing what normal working hours were.

But this was all a fairy tale – the glow didn't last, the gingerbread quickly crumbled. The big, bad wolf came, setting stock prices tumbling, bringing bankruptcies in his wake. Suddenly, the stories didn't hold up. Stock option plans and employee shareholdings were worthless when shares were 70% below the issue price. Pizza and jelly beans had made them fat, and long working hours had gutted their private life. Free massages at work and multimillion ad campaigns fell victim to the sudden need to cut back. Employees organized, job safety measures became a hot topic, variable compensation schemes were cashed in for fixed salaries. Who cared about profit sharing when profits weren't due to appear before the second quarter of 2005? After all, the rent was due on the first of the month.

So, is this the end of the fairy tale? And of the New Economy, the shining vision based on the Internet transforming the way we live and work?

As usual, the truth lies somewhere in the middle. The hype from 1998 to March 2000 was every bit as unrealistic as the subsequent chorus of gloom. In literary terms, I am reminded of Kleist's "Marquise of O ...", where for a brief period one character is simultaneously angel and devil.

This is a good time to turn a professional eye on things, to bring a sense of proportion and a sound, practical approach to visions, potential, constraints, risks and – above all – the human factor. Let us see what the Network of Networks really has to offer us in both business and our private lives! Let us explore how it can make everyday life simpler, quicker, cheaper, more colorful and more appealing! And let us look not just at what is technologically feasible, but at what is desirable in human terms!

When television first emerged, people thought this would be the death of consumer magazines. And what is the biggest segment in consumer magazines today? The segment of TV magazines!

When the cell phone first emerged, people thought of SMS as a funny little game for engineers. So, how many short messages – practical or romantic – are sent every year in Germany now? Over 20 billion!

What does this show us? That people are unpredictable at the level of everyday amusements, and that they find things appealing about new media and technologies which are far removed from the new possibilities being trumpeted. Once again, the unexpected turns up, as it were, in the small print – although in this case, not as an unpleasant surprise.

Clearly the Internet has the capability to redefine transactions in all areas of life – from “Cyberbride”, where I can plan my whole wedding online, to the B2B market for ships going for scrap. It is unbeatable in terms of speed, globality, data volume and personalization. But none of this tells us which functions will be the great “killer applications”.

Reinhold Würth, the czar of the screw, said once that any firm could restock more easily through the Internet than through his sales force. But nobody wanted to – they obviously enjoyed the periodic cup of coffee with the sales representative ...

So we are left to wish the New Economy a little modesty, a touch of humility, and a lot of flexibility in dealing with the unexpected.

When the PC was created at the start of the Eighties, people thought that everything would change. Share prices shot up in New Market style for the first three years – and then came the crash, and nothing moved for 18 months. However, those who avoided the temptation to throw out the baby with the bathwater in this phase, and held on to solid shares like Compaq, Lotus or Apple had every reason for satisfaction as the market gained steadily over the years. Proprietary added value for the customer – this is what you should look for when you buy shares or go to work for a company, and this is what venture capitalists like our Transatlantic Ventures AG look for, whether in Hamburg or San Francisco, when they invest money, time and know-how in young companies!

The fact that very few Internet companies are making money as yet is due to the fact that most of the really useful Internet services have yet to be developed! This is the context in which I offer my 33 visions for the Internet of the future. Many of these are less visions than challenges to companies worrying about their share price and turnover. The reasons for this are simple enough: the Internet is still such a young medium, and we have so little empirical basis for our view of it!

Forgive me if each vision is stated briefly and very much to the point – we only have 45 minutes. This means it will be rather like Giorgio Manganelli’s wonderful “Sixty Second Stories” ...

Before I start, however, one more unusual thing – I’m offering each of you a small wager. My bet is that 22 of the 33 visions will come true in the next ten years.

If you want to take me up on this, let’s exchange business cards afterwards. Starting in autumn 2011, the loser invites the winner to my favorite Berlin restaurant, the Paris Bar. Okay? And that should convince you of my confidence. I have, incidentally, had a copy of the speech sealed in an envelope by Notary-Public Dieter Karl in Munich, so that we can be sure in ten years’ time just what we were betting on, without my having any chance to tweak the results.

I.

Like toasters, table lamps or coffee makers:

The Internet will be simple

Plug 'n play is the biggest lie and biggest customer disappointment since the invention of the computer. Connecting to the Internet and even surfing the web have so many pitfalls and traps that Boris Becker's question "Am I online already?" in the commercial is pure irony.

Together, we will find a way to make the connection as simple as plugging in an appliance and as easy to use as the telephone. Otherwise, we will see a "digital backlash" (as Matthias Horx puts it) in large groups of the population, with highly emotional rejection and a lot of frustrated users taking their ire out on their PCs. As with cars, the growing complexity will be managed by experts rather than users, hiding itself behind an intuitive user interface.

II.

Smiling hosts:

The Internet will be friendly

Let's assume that you're booking a hotel room or ordering a Big 'N Tasty meal. What would you do if a small error produced a message like this?

"Application Error

Exception E Access

Violation in module Sting Desert Rose I.SCR at 00014A3E

Access Violation at address 0000001.

Read of address FFFFFFFF."

You'd never come back, of course! PCs and the Internet treat us like this all the time.

But people won't put up with this for long. What Apple did for computers with the Macintosh is what we need in the Internet – charm, warmth, smiles, friendliness, humanity. We need refrigerators that tell us apologetically "The link with the supermarket's down at the moment, but I'll try again in five minutes."

III.

Somebody's talking to me at last:

The Internet will understand us

When will we finally get to communicate with the virtual world out there with the interface we've used since our second year, instead of two stumbling fingers? When will we finally be able to tell the PC to display our new e-mails in our own mother tongue? And when will we be able to ask a simple and straightforward question, like whether the biomass of all the ants in the world is greater than that of all the humans?

This something for the experts to argue about, as natural language is infinitely complex, and there's already been a lot of research into speech-to-text technology. However, I believe it's like computer translation – after decades of investment, it's slowly starting to work. As a result it will be possible in the next decade to speak commands involving single words rather than syntactic relationships into a microphone attached to a PC or laptop.

IV.

The Porsche on the data highway: The Internet will be fast

What do you do to avoid a stomach ulcer when you're waiting at the Internet terminal? I leaf through technical journals, copy documents, make phone calls or go to the bathroom. It's as if you had to wait for a minute after changing TV channels for the new picture to appear.

The solution is there – DLS. This is still a high-end product, too expensive for most media budgets and too unreliable. But in ten years most of us will surf the web fast, downloading films, images, music and books at more than 12 times ISDN speed. And then we won't have to be T-Online customers any more, either ...

V.

The telephone kiosk of the future: The Internet will be publicly accessible

In the Tengelmann of the future I'll be inspired by seasonal recipes, suggestions for what I can put with which fresh vegetables, and which wine is the ideal companion. In the KIEA of the future I'll have my apartment in virtual form on a kind of PDA, ready to download the various items of furniture on the terminal by the shelving department and see in three dimensions how they'd look in my home. In my doctor's waiting room, it won't just be hypochondriacs preparing for the visit by checking the latest research on the painful organ and possible therapies online. In future, hospital trays will double as Internet terminals, offering patients an entertaining window on the world. Restaurants will have table-top terminals that not only display the menu in all the world languages but also allow me to place my order, read the recipes and send an e-mail to the attractive young woman at the next table. Schools and universities will have research and training terminals at every corner – and so will airports and railway stations, with information on arrivals and departures, price comparisons at the nearest duty-free shop, car rentals and hotel reservations.

According to Friendlyway AG, the market leader in this field, such digital fountains will be more like ATMs or the Lufthansa check-in system than the conventional Internet PC.

In case you're wondering if the web pad or PDA with UMTS connection will make public terminals as obsolete as the cell phone has made public telephone kiosks – I don't think so. There are many things which require large screens (which I don't want to lug around) and high speeds or broadband capability. Quite apart from the costs (the 15 billion in royalties plus interest has to be covered).

VI.

I want it all! The Internet will become the medium of convergence

One trend in media use in recent decades – people are using more and more media, switching between them faster and often using them simultaneously. This is what the Network of Networks offers, whether through the phone line, electric cable, TV or

fiber optic cable. We will make phone calls via the Internet cheaply and sometimes with visual contact, listen to music from huge virtual jukeboxes, watch TV, telecommute, communicate, pick up news, research and flirt.

VII.

After telephone, radio, TV and fax: the Net will become a genuine mass medium

In August 2001 we all read for the first time with alarm, "Fewer web users in the USA. For the first time the number of Internet visitors is dropping." Like the unemployment figures, where the seasonal fluctuations often push the tragedy of absolute numbers into the background, the analysts told us, "No need to panic." But we should pay attention to signals like these! Although the number of Internet users in Germany rose from 8.4 million in 1998/99 to 24.2 million in 2000/01 (according to GfK Online-Monitor), this alone is not enough to turn a medium into a mass medium. We see this will the cell phone – people are buying more and more, but more and more of them are just lying around and spoiling the mood and share prices of the telecommunications companies. The first six visions and challenges have to be met before the Internet can become a real mass medium! And we should not forget that 2.5 billion people on this earth have never made a phone call.

VIII.

From Verona to Alice: Women as the number one growth potential

You can't be a mass medium if you're lacking half of humanity. And this is a half which has made up a lot of ground, and will go on doing so. The Internet has lost its association of pimply techno freaks chatting through the night under fake girls' names and surfing porno sites. It has obviously become interesting for the more attractive part of humanity – and a good thing, too. If I linked this with the call for simplicity, friendliness and evident pragmatic use value, I would be accused of sexism – but there's something in it, for all that. Men are simply more caught up in technology, and ready to make sacrifices for it.

*(A small joke to lighten the mood:
Many computer users wonder what gender their computer is.*

*Women tend to think of it as male, because –
computers are full of information but still have no idea.
They are supposed to solve problems, but most of the time they're the biggest
problem of all.
And to get their attention, you have to turn them on.
As soon as you've chosen one, it turns out you could have a better model if you'd just
waited a little while.*

*Men on the other hand see the computer as female:
nobody other than their creator understands their logic.*

Nobody else understands the language they use to communicate with each other. They never forget even the smallest error. The moment you choose a model, you start paying for the extras.)

IX.

Those who don't want to be old ...

The second major potential source of growth is older people

For people no longer able to get around so easily, and particularly for those stuck in hospital or a nursing home, the Internet is a godsend. For them, it's a window on the world, a platform for communicating with children, grandchildren and friends, a way to stay in touch with the present and order anything from home. When a single step is an almost unmanageable hurdle, a shopping trip becomes a nightmare. That's why it's so good that Internet access for the over-Sixties grew 80% in Germany from 1/2000 to 1/2001.

The first hospital Internet wards had just one problem – their sensational success, which resulted in intolerable waiting times.

X.

The e-pass:

Identification systems make possible clear identification of users for any use worldwide

The important term here is "make possible". There will still be plenty of uses where I don't want to be identified. And there will still be fears of being listened to and spied on in every aspect of my behavior.

However, the other side of this is that plenty of transactions require clear identification – payments, contracts, m-commerce, tax returns, voting in the online democracy, for reservations and bookings, virtual clubs, subscriptions, personalized service etc. Whether we do it through eyeprints or fingerprints, we will have to identify ourselves, and we will want to do so. There will be crime and abuses, but that happens even with the traditional passport.

XI.

Audi or Beetles?

Surfing and mailing will become cheap, attractive content expensive

Two contrary trends will mean that people's media budget (nowadays a sort of second rental in the virtual homes of the information society) will be neither strained nor eased.

General Internet use will become cheaper, through flat fees, sponsored use of pre-installed services, student rates, tougher competition between providers etc.

By contrast, access to specific services with “must have” information or unique services with high value to users will cost money, as providers will no longer be able to finance themselves through IPOs or advertising alone.

XII.

Let’s hear it for Talcum!

Payment without cash cards or virtually money – simply through the phone bill

Admittedly, this is seen from the user’s point of view. Think how awkward it is to pay a couple of cents or Euros for each transaction by credit card, each bank transfer, each direct debit order, or use virtual cash. How pleasant it would be to see a list of all minor charges on the telephone bill at the end of the month, whether it’s from Telekom or one of its competitors. This would also help us realize sooner that Internet services can’t always be free, as our phone bill has already helped us do for services ranging from a wake-up call through directory listings to SMS.

XIII.

Don’t leave home without it: The Internet will be mobile

There’s light at the end of the tunnel: the days – and nights – of crawling around under the hotel room desk to find the right outlet for the Internet connection are coming to an end. Whether the future standard is UMTS, Bluetooth, wireless LAN or whatever – we’ll be able to access the Internet everywhere, and cordlessly. We’ll be liberated from fixed connections, just as the cell phone has already liberated us for phoning. The driving force here will not be so much the content (unless it helps me in my specific situation), but interaction with other users and playing games to pass the time. The natural locations for all this are the boring places like airports, railway stations, waiting rooms or hotels with local wireless networks.

XIV.

Never alone again: Terminals are everywhere in life

We will be surrounded by terminals, most of them financed through advertising and transactions. Whether in the fridge door or the inside of the briefcase, as digital school satchels or screens in our clothes, at the point of sale or on the exercise cycle, in the restaurant or at our desk – everywhere there will be segments of the Internet with specific functions and maximum user friendliness waiting for our attention. They will be like clocks, always one near at hand.

XV.

E-mail for the woman in seat 17C: Internet access in public transport

Lufthansa plans to wait until 2003, Cathay Pacific already has it. We are not only the sole form of life able to eat a hot meal while traveling (according to Lorio), we can send e-mails or surf the web at an altitude of 10,000 meters. The same applies to the car, with exciting services like navigation to steer us around traffic jams or tourist and gourmet tips for wherever we might be. Long rail trips will also seem shorter. I'm not so sure about bicycles, though ...

XVI.

The two unlike brothers. Mobile e-commerce will lead to tension with static retailing

In the past the B2C providers have often complained that consumers gathered detailed information about products on their web pages – and then went to their usual dealer to buy their car or travel package. The web site was too complicated, the transaction too hard to understand, or the sales staff were just too nice ...

This will change with m-commerce. People will look at products in the stores, ask for advice or download information like manufacturer videos on a mobile unit – and then go into the Internet to locate the lowest-cost supplier and have the product sent to their home. With the abolition of retail price maintenance legislation, online price comparisons will become a national sport for the bargain-minded Germans. The latest rage is accordingly developing multichannel strategies (see the new Boston consulting study, "The Multichannel Consumer").

XVII.

Not as dead as they thought: B2C will be revolutionized by optimizing ordering and delivery

If you want to take a trip, you'll go to a full-service site and explain in natural language, "I want to go to Capri at Easter". The computer will congratulate you on your choice, and ask all the questions needed to buy the tickets, book hotels, restaurants and rental cars, buy guide books, dictionaries, sun cream, currency etc. Everything will be taken care of, paid and delivered in just one transaction. Pleasant and customer-friendly enough, isn't it?

If an interesting author appears on the Birolek talk show and mentions their latest book, a potential customer can ask their computer which one it was and tell it in natural language to order it where it's quickly available and the shipping and handling costs are lowest. That's what we want, isn't it?

Bundling goods and services in "need clusters" and integrating delivery into major logistics systems and offline presences will enable B2C providers to get a grip on distribution costs. The problem of the need for presence – particularly difficult for single-person households – is reduced, as deliveries are bundled, delivery times can be prearranged and additional collection options created with bakeries, filling stations

and other existing high-density distribution networks. This will be the decade of logistics and networking.

XVIII.

The oil of the 21st century:

Without the Internet the economy will reach its limits

Productivity increases through the computer distinguished the outgoing 20th century. The new 21st century will have a similar experience with the Internet – in almost all procedures and value-added chains. Naturally, as with all such revolutions from the steam engine to the autobahn, there will also be efficiency-reducing adverse effects, but the positive ones will clearly dominate. To give just one example, major associations and organizations can save double-digit annual spending on printing and mailing simply by transferring their mass mailings to virtual one-to-many marketing in cooperation with companies like eCircle. Not only that: they will be faster and able to personalize their materials consistently.

XIX.

True instead of new:

The New Economy is subject to old limits as well

People thought the New Economy was completely different. Marginal costs would tend towards zero, the difference between originals and copies would disappear, and everybody would rush to the free services, which would become standards like Windows and later turn into gold mines. All of which is true, although only half true. Invested capital still has to generate interest and repayments, brand creation is expensive even in the Internet, and advertising revenue only appears where people are already using a service they like. The widespread no-charge mentality makes the P2P (path to profit) long. Many a dot.com learned on the verge of becoming a dead.com that the classic laws of the economy are still in force. The true beneficiaries of the next few years will be the groups that were able to buy up their young Internet competitors at fire sale prices.

XX.

McDonalds or a hamburger stand?

Globalism and nationalism in parallel

What are we seeing in Europe? The integration of the EU with a common currency, accompanied by growing awareness of regional and even national features. This is how it will be in the Internet as well. The Amazons and eBays will not automatically conquer the world as first movers. Creating global brands and logistics is too expensive, and the human need for recognition of national identities and traditions is too great. We will see exciting duels like the one between MTV Deutschland as a creature of a global group and VIVA as a German creation.

XXI.

The dream of the virtual butler: The Internet as a household manager

The printer that orders its own ink is just a prelude. Many household transactions will be taken over gradually by computers and the Internet without our even noticing. Examples: refilling the fridge with the same foods, reordering fuel oil, monitoring heating or alarm systems and remote control of video recorders. Some will access their web cam on vacation to see how the garden and pets are getting on, others will tell their bathtub from work to fill itself with 100° F water at 7.30 pm, and others will use the journey home with their loved ones to put on slow music and turn the lights down at home.

XXII.

From the first car to the S Class. Really user-friendly, efficient searching has yet to come

How much stray data do we have to wade through when we key two words into a search engine? This has to change – and will. Future systems will watch us, learning about us and our information needs and imperceptibly evolving into personal information and research assistants or even knowbots. They will filter the data for each of personally, sorting and organizing it by its significance to us. They will note the context of the search, asking questions first rather than letting us drown in the flood. They will use natural language instead of Boolean operators, have a high AIQ (artificial intelligence quotient) and offer us customized vehicles for understanding. As John Naisbitt put it, “We are drowning in information and starved for knowledge”.

(This is where we see the value of visions and challenges. If you and I do not know and say clearly what we want, a future medium like the Internet will become the plaything of incompetent policies and impenetrable corporate interests. Without Martin Luther King and his dream, the black people of the world would not be where they are today. And without clear ideas about how the Internet can make our lives better, we will see any number of corporate bankruptcies and false gurus. This is where I differ from Helmut Schmidt, who said, “Anyone with visions should see a doctor”.

Even so, I have to ask myself what basis there is for my 33 tracks in the chaos of real developments. The answer lies in any number of speeches and articles, in years as spokesman for the publishing industry on Internet issues, in numerous TV broadcasts and columns, in nights of discussion with the prophets of the New Economy, in market research and experience from numerous personal investments in Internet companies.)

XXIII.

“Get me Gerhard Schröder’s home page!” We need a general URL directory with a lot of access capability

It is understandable that URLs need to be precise in the Internet. They are like phone numbers. But think of all the ways we now have to record, manage and locate phone numbers! In our cell phone or PDA, our phone systems or the Intranet, leather-bound notebook or public telephone directory, Yellow Pages or CD-ROM – access is fast and efficient.

Something similar will happen with URLs, in many media, some current and some permanent, online and offline and with multiple access, as the human brain requires and not the logic of colons and forward slashes.

XXIV.

A friend, a good friend ...

The Internet as a guide and helper in life

Let's dream for a moment: every morning, lunchtime and evening I get a couple of screens by e-mail with all the news relevant to my interest profile on people, companies, issues, sports, stock market prices etc. In between an SMS arrives to tell me a friend will be on Christiansen's talk show this evening, followed by a film with my favorite Audrey Hepburn. I will be reminded of major birthdays of friends, relatives and colleagues three months in advance, of normal birthdays three days in advance. When my favorite designer label cuts prices, I will get an e-mail – naturally showing the opening hours for the store in my city, with parking tips. When Sting or Elton John announce a concert in my area, I will get a timely offer for tickets, with a reminder that concert tickets were the stake in a wager with Kirsten. As an asparagus lover, I will get a couple of recipes e-mailed at the start of the asparagus season, showing the calories and suggestions for a workout. And when the new Julia Roberts film opens

...

Let's dream on! All this has long been possible, technically. It just has to be put together. I'd really like to see this, because the result would be a dream – the dream of a personal virtual friend. Sadly, he won't be able to introduce me to Julia Roberts.

XXV.

Surfing up the learning curves:

The early inefficiency of Internet use will disappear

Have you ever counted how many e-mails you receive and send every day? Have you measured how much time you waste screening out undesired content in the Internet? Do you have any feel for how much time you spend booting PCs, going online, coping with network crashes and the like?

While some companies are introducing no-e-mail days, others will invest a lot of money to reduce this waste of resources. They will set up clearly organized virtual offices with filters, ticklers, filing, intelligent forwarding and distribution systems, summary options, boilerplate answers and extensive personalization. People will still find ways to sneak in the occasional game of space invaders, but will do their work twice as efficiently in the Internet.

XXVI.

**Always there: the most patient teacher and biggest knowledge resource!
The fields of e-learning and knowledge management will explode!**

The half-life of knowledge is getting shorter and shorter, lifetime learning and curiosity more and more important as a principle in life in an age which demands mobility, flexibility and innovativeness more than ever before. Given the inability of current systems of training and retraining to meet these needs, the Internet offers us an ideal teacher – patient, always ready, available everywhere, for every level, friendly, stress-free. As the world's most comprehensive and largest school or university, it will offer suitable teaching material for all, and as the knowledge resource for humanity (and every organization and company) it will be there to answer every question.

XXVII.

**The end of the voting machines:
The state will make massive use of the Internet**

I confess, I'm not so sure about this. But as always, I'm optimistic. And a little voice is promising things like renewing my passport online from home, filing my tax return as an e-mail attachment, choosing my license plate on my laptop, casting my vote on vacation. No queues, no opening hours. Fast, transparent, service-oriented and more cost-effective public administration. The state as a key user – naturally, assuming that we all learn to use the Internet as a matter of course at school. Those are my hopes. Will red tape allow them to come true? We'll see in ten years.

XXVIII.

**Cyberlove and virtual reality:
We will be surrounded by virtual figures**

A child was recently talking to me about the film "Final Fantasy" and commented that Tom Cruise is a "real flesh-and-blood actor". Lara Croft has now become both a virtual cult figure and a real-life cinema heroine. Just as special effects and computer processing shape photos and animated images today, our heads will be filled by an intoxicating mix of real and virtual figures, and the old epistemological question of "What is real?" will land on the philosophical scrap heap. The world will be full of virtual sales staff, models, moderators, friends, actors, coaches, consultants and news readers.

(But we will still lie alone in bed after making love to our dream woman. Or as a major south German newspaper recently wrote: "In the long term, even the web surfers of the world will come to realize that after hours of surfing they have experienced nothing of sun, wind or water, let alone the taste of freedom and adventure – just 1,001 mouse clicks.")

XXIX.

How real is reality?

We will expand our perceptions vastly

It's not just the new figures. With a web cam we will be able to sit in our grandmother's living room or lounge with friends in the summer air. We will accompany the Reinhold Messners of the 21st century up the 8,000 meter peaks, and round the Cape of Good Hope with the round-the-world sailors.

And we will be able to modify reality through simulation, play with the future and see how it feels: what would the balcony look like with geraniums, how about putting the black table in the kitchen? How would my girlfriend look in the yellow miniskirt, or Angela Merkel with a new hairstyle?

A dual liberation in a sense – liberation from the constraints of my local perspective, and also from the shackles of my reality.

XXX.

Have you already made a mistake today?

Every opportunity involves risks – particularly the Internet

The Vatican is considering appointing a patron saint for the Internet. It needs one. We already have a federal self-help association for online addicts, to help Internet junkies find their way back into real life. Many people are afraid that transactions on the Internet will make their life a goldfish bowl in the sense of Orwell's visions of Big Brother (where data protection is the key term). Psychologically-minded people worry about isolation in the home ("cocooning"). Sociologists outline scenarios in which the world is divided into Internet users and people without Internet access ("digital divide"). Political activists point to the negative balance of jobs created and destroyed by the Internet. Parents and teachers claim that it is impossible to protect young people from extremist and political content on the Internet. Lawyers point to the endless copyright violations, software experts to the dangers of contamination from global viruses and threats to sensitive systems by sophisticated hackers and Internet spies reaching all the way to the Pentagon. Staff representatives are opposed to monitoring staff e-mails and mobbing campaigns on hate sites, the financial world worries about more forged announcements affecting prices being smuggled into professional web sites. Forensic experts could write books about new forms of cybercrime, and even Bill Gates had a hacker use his credit card to order Viagra. My feeling is that the list of horrors will get much longer. However, even Seneca knew the answer. "Nothing seems so bad, once we expect everything."

XXXI.

The Internet will disappear – at least for many people

Just as there are people who steadfastly refuse to watch TV, there will be a significant number of people who reject the Internet for all these reasons. However, this will be difficult, as the Network of Networks will increasingly disappear from our awareness. Like all the chips and motors today, it will become an omnipresent

background mechanism and service provider in countless areas of life, without being explicitly perceived.

(But let's go back to the refuseniks. Here I should like to yield the stage briefly to Christian Nürnberger, Germany's leading Internet critic.

"I reject any medium I cannot trust. If I do not know whether a piece of information in the Internet comes from an independent journalist or just a PR or advertising agency, then the information is worthless, and I'm not prepared to pay for it.

I reject any medium where entrepreneurs scramble, faking balance sheets, massaging numbers, constantly pushing the limits of the law and fooling customers and investors.

I reject any medium that spies on me instead of serving me, creates customer profiles for me and tries to sell me to address list dealers and marketing agencies. And I reject any medium that steals my time."

You see how important visions and challenges are – otherwise, we'll never get Mr Nürnberger online ...)

XXXII.

The glass is half full:

The opportunities clearly dominate

What I have just been saying will motivate many pessimists to write off the Internet as an infernal device. However, for most people the positive side will clearly dominate.

We will have an unsuspected edge in terms of transparency of prices and availability, and will become delightfully used to the absence of opening hours on the Internet.

We will be able to access in the fastest and most efficient way all the information we need to manage our complex lifestyles. We will be able to communicate with people all over the world in the simplest way. Future generations will enjoy the positive ecological impact of the Internet, thanks to lower resource utilizations. The world's economies will benefit from the far-reaching disappearance of variable costs in multiplication and distribution. Despite all their efforts to shackle the web (Iran has just closed all its Internet cafés), the dictatorships of the world will never manage to block the free flow of information which will ultimately mean their downfall. Many Third World nations will elegantly skip a number of development stages in media and communications and establish outstanding cableless infrastructures.

In short – the global information and service democracy will find its medium in the Internet.

XXXIII.

Pandora's box:

There will be new applications that we cannot even imagine

The Internet today is in the situation of the car at the start of the Twenties. Within just a few years the first major areas of application have emerged. E-mail, e-banking, e-commerce, e-auctions. In ten years we will have options that are not even remotely apparent

today. From the gruesome – like the recent first live birth online – to the radiant – like the wedding resulting from a perfect match in a virtual dating service ...

**“In future computers may weigh no more than 1.5 tons.”
(A prediction for computers from Popular Mechanics, 1949)**

I hope that my 33 visions and challenges are more accurate than my predecessor was. Only if we take these seriously and make them come true will the New Economy find its way out of crisis. But then it will be on a sustainable basis, rooted in real values. Let's take up the challenge!

See you in September 2011!

Getting back to my wager – I'm perfectly serious. As a small service, I'm giving you my 33 headlines, reduced and laminated, so that over the next ten years you can look and see what's come true and what hasn't. However, you have to decide today whether to bet that fewer than 22 of my visions will come true. Give me your business card during the day or at the cyberparty this evening, with the note “I accept your bet of 17.09.2001”. Or mail me the sentence with your coordinates to: mail@florian-langenscheidt.de. You can also find the full text of my speech at www.florian-langenscheidt.de under the heading “Reden”.

I look forward to meeting you, and to plenty of entrecôtes with Béarnaise sauce in the autumn of 2011!