"Less is more" in B2B

Hans-Jürgen Hoffmann, *Affiliate Member, IEEE*

Abstract--There is some disillusionment with E-business. How many companies already earn money with their Web presence? Are business correspondents and buyers starting a business-to-business (B2B) activity and then really continue to do E-business? Or: Is in many cases the E-business activity soon replaced by and continued with traditional business forms?

Agreed, there is a big number of E-business participants. A Gartner Group investigation (e.g.) forecasted 2000 world-wide turnover of more than 7 billion dollars in 2004. Are you aware that the forecast recently has been reduced remarkably? Are you surprised, disappointed, ...?

What causes the situation? What should be consequences? The paper considers one aspect, document exchange for B2B affairs, related to this situation. Accepting the thesis "Less is more" should be a design guideline. The document exchange systems/tools sets HOTxxx and MALL2000 for B2B are a design approach following the thesis.

Index terms--business-to-business, disillusionment, less-is-more, document exchange, HOTxxx, MALL2000

I. INTRODUCTION

There is some disillusionment with E-business. How many companies already earn money with their expensive Web presence? Are business correspondents and buyers starting a B2B-activity and then really continue to do E-business in this form? Or: Is in many cases the E-business activity soon replaced by and continued with traditional business forms, letters, phone calls, fax, E-mail?

Agreed, there is large number of E-business participants according (e.g.) a year 2000 investigation and forecast by the Gartner Group for 2004 [18] – see **appendix 1** –; however, in Febr. 2001 the forecast has been reduced by about 15 % [23]; in a very recent divulgement by Forrester Research [7], April 2001 – see **appendix 2** –, an interesting point is brought up, *"engagement in dynamic collaboration of companies"* (see **sections IV** and **V** below). Another (early) warning is [29]. Looking towards small business, see [31]. These studies make a difference to previous euphoric thinking. Are you surprised, disappointed, ...?

Prof. em. Dr. Hans-Jürgen Hoffmann, Darmstadt University of Technology, Dept. of Computer Science, Chair PÜ, Wilhelminenstr. 7, D-64283 Darmstadt, Germany, HJHoffmann@computer.org.

What causes the situation? In the first part of the paper I will shortly highlight problems in a somewhat humouristic fashion. What could be and should be consequences? I consider the situation in the second part under the aspect of document exchange for B2B affairs, (e.g.) in business negotiation tasks. In the kernel of the paper an old and, in my opinion more sound paradigm of business co-operation, viz., *exchange of structured documents*, will be mentioned, modern forms of its electronic treatment realized by the author and his co-workers will be discussed and a software approach following these ideas will be presented.

II. SITUATION

The mental load for doing B2B by business people in the present form is too high, the approaches are too complex. Remember, business people are not (necessarily) computer freaks. They want to get what I want to call *helpful support* for their day-to-day work, not a need for demanding and often surprising acquaintance with computer software as it is on the market to-day.

Let me illustrate some problems by two comics which I recently found inviting a critical view about what information technology presently is offering. This kind of support I want to call *undesired, hard support*.
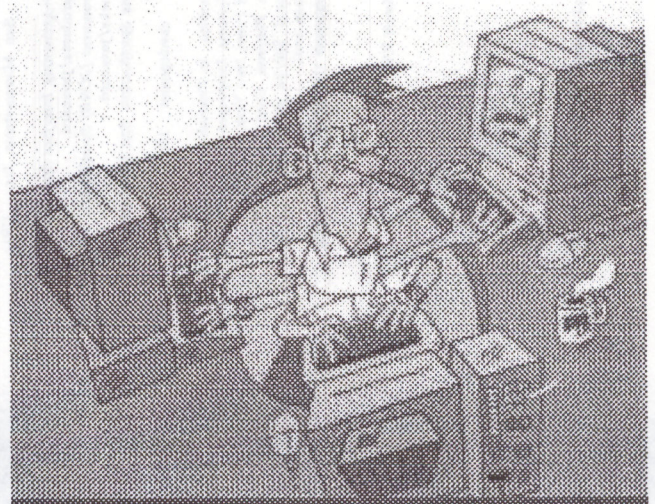

Fig. 1: Simultaneous working habit (taken from a recent conference and exposition announcement, 2001)

Missing integration of systems/tools; their non-uniformity

Psychologists say that, although certainly people are able to perform different actions simultaneously, walking, looking around, observing a snag in the path, speaking, etc, – in doing professional work they follow only one sequence of task steps, concentrated on what they want to achieve, with low effort, fast and error-free.

My argument is: There is demand for integration of *helpful support* in one uniform system/set of tools and under one mental paradigm!

My experience, however, in observing present B2B activities (in a negotiation task in the WWW, e.g.) is that
(i) you have to employ your favorite WWW browser where
(ii) you search during business negotiation with your favorite search engine for the portal of a possible business partner/correspondent with which
(iii) you have to be acquainted, a process of orientation, how to proceed for starting your inquiry
(iv) and in an ad-hoc learning process how to navigate in the site,
(v) filling a form for whatever is requested, to identify your affiliation and/or detailed inquiry,
(vi) very often without a simple documentation possibility, an important aspect, about what you are looking for forcing
(vii) to start, by (e.g.) pushing the ALT+PRINT-keys, an inclusion of the filled-out form into a word document
(vii) finally getting a reply with some handling possibilities which you have first to investigate about possible commitments and security measures and
(viii) if you are unlucky with a more or less unfamiliar and/or inconvenient help excursion
(ix) and so on.
If you are not convinced about what the first correspondent offers you have to perform all these steps once more in a different scenario with another, second possible B2B correspondent. His system/set of tools are different, non-uniform. And so on. And so on!

The scenario is common:
No integration. No uniformity.

Related to my thesis (**section III**) my argument is about usability. Remember the 2nd rule in an old, but still valid paper published 1971 by Hansen [10], *"Minimize memorisation / Predictable behavior"*. In modern words, it is a demand for integration of uniform systems/tool sets. Note, it is not an argument for reduced functionality. You are forced to use simultaneous working habits with a number of non-integrated systems/toolsets, *hard support*, in contrast to the required *helpful support* as demanded by a well-known basic ergonomic rule.

Software/hardware problems

A prerequisite to do what I have described is your hard- and software has to be in proper operation. Look to the second (ironic) comic (may be found in recent newspapers and Internet communications; sorry, that I have to give a translation of the German text).

What are the arguments of all the vendors of hard- and software? It is easy to learn, it is easy to configure to your needs, you have to learn it only once[1], it is always reliable and robust against mistakes, ... (add the arguments of your preferred vendor!). Again, demand for integration of *helpful support* in one uniform, reliable, and robust system/set of tools and under one mental paradigm comes up as the goal. A side-remark just beforehand: I will not argue for an (artificial) intelligence approach with a lot of surprising behind-the-scene activity.

Another common scenario:
Systems/tool sets are designed without considering the needs of the users, i.e., the businessmen..

DIESER COMPUTER MACHT NICHT EINSAM
(DENN STÄNDIG BRAUCH ICH JEMAND, DER MIR MIT DEM VERFLIXTEN DING HILFT)

Fig.2: Problems with unreliable hard- and software
And here comes the translation of the ironical text:
"This computer doesn't make me lonely
(for I always need someone who helps me with the confounded thing)"

I hope that you now agree that the situation has to be improved. Look to my thesis.

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[1] That this is not always the case look (e.g.) how to specify a file from your hard disk. In my PC the OS from the well-known company in Redmond has dozens of different windows to achieve this task! You have to learn all! And if you look around you will find a lot more of such pitfalls.
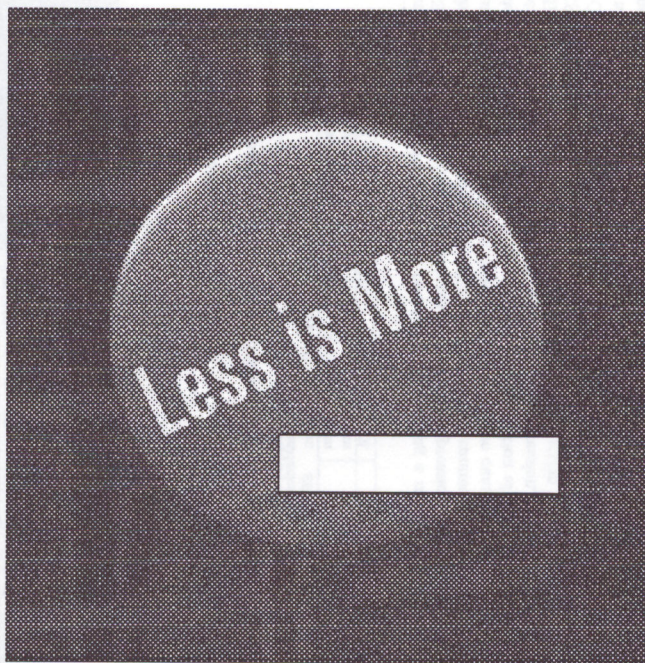
Fig. 3: A sticker which I recently found in an exhibition booth (company name intentionally hidden), 2000

III. My Thesis, *"Less is more"*

Again I start with a (scanned, originally coloured) picture (**fig. 3**).

Please note, the thesis, *"Less is more"*, does not exclude reasonable functionality. I am looking for integrated, usable, uniform, reliable and robust functionality.

Can you agree? So, let me mention the old paradigm for business co-operation in manifold business affairs (not only for negotiation tasks): *"Document exchange"*. This is the paradigm which I follow in our present work. And what is the design goal below this general paradigm: A well-planned, uniform, flexible system-/tool set-approach with appropriate, non-repeating, consistent functionality to realize reliability and robustness.

The thesis *"Less is more"* can be found more and more. The term is well known. E.g., I found about 1800 citations in a Web search related to my thesis together with "B2B" (e.g., [11], [16], [30], [32] – alphabetic order –); here, page and site design is covered. Just to give an example with a scientific background: Although the famous book by Nielsen [28] is not concentrating on the topic B2B (but on Web design in general) in an review about this book, however, the term is used (look in the Amazon.com site). In an article by Monfort [27] (again not directly related to the topic of my paper) another "thesis" comes in combination with my thesis, *"make it easy"*. And, a call for standards (i.e., uniformity; again not directly in the scope of my applica-

tion area – i.e., document exchange for business negotiations –, viz., in logistics) should be the last in my list of citations from my Web searches.

IV. Exchange of Structured Documents

Between companies traditional document exchange comprises catalogues, requests for offers, tenders, contracts, bills and the like. The Forrester research divulgement mentioned in the introduction [7] supports improvements in „*engagement in dynamic collaboration of companies*". Well, we try to contribute by a system-/tool set design (**section VI**) for document exchange in B2B and under the constraints of my thesis.

The term „*document*" shall comprehend all these instances. Form and contents of the documents, usually and by long tradition, follow some kind of „standardization", by general and/or individual agreement and/or habits. This is a structural aspect. Business documents are structured documents; one criterion of uniformity.

All these documents, at first sight, consist of written text. Documents (especially catalogues and contracts) will, in addition, include tabular and diagrammatic parts, drawings, pictures (what I now call „multimedia"). The technical facilities which we have available nowadays certainly allow to handle such document parts structurally contained. Uniform „*parts*" in a structure are further criterion, here for uniformity in the mental paradigm.

Important features of documents (partially even requested by rules of commercial law) are always included as routine attachments, e.g., indication of legal form and seat, names of representatives, trade conditions, etc. Again, this kind of information may easily be attached in the document structure. This is a criterion of document exchange reliability. Note that such attachments are individualized with information of each individual correspondent, originated as an intra-company measure.

Inside companies we find another structural part, a specification of the persons/departments who have to see a document for agreement and or confirmation, *interdepartmental circular memos*. This gives a workflow aspect attached to a document in its whole. In document exchange (inside and) outside and between companies/correspondents the distribution list indication („cc" or „bcc") is another well-known form of workflow information. In document exchange between correspondents a workflow attachment to an exchanged document is an inter-company measure.

Above, some buzzwords for document structure are mentioned. We find them regularly in non-electronical document exchange. Of course, they also have to be available in electronically supported B2B business affairs realized by

document exchange. And, we have to provide them under my thesis „*less is more*".

How to do it? It will be a kind of a controlled, structured E-mail exchange, one structured document per business affair, consisting of (multimedia) parts, having attachments. The attribute „*per business affair*" is very characterizing for what I have in mind, no exchange of unrelated masses of documents/E-mails intermixing different affairs in correspondents´ offices. An exchanged document, by itself, is also the „*folder*" guaranteeing a common structure for all archives of the correspondents involved in one affair considered.

That our approach has good perspectives is supported by a statement of IBM Institute of Advanced Commerce [20]:

Business activity on the Internet is currently limited to publicizing the business opportunity and catalog based sales, but it will rapidly expand to include the negotiations conducted to settle the price of the goods or communities being traded ...

V.   HOW IT MAY LOOK IN B2B

There are already proposals and realized approaches for advancement. One should remember, e.g., the *POLITEAM*-project [33] in Germany or the *Avalanche*-project of *Andersen Consulting* (now *Accenture*, [17a+b]). A statement by Cohen of 1999 [5], out of which I want to give a short citation (with the name of a company made anonymous), clearly identifies the point:

Of all the things you can do on the Web, E-mail is still far and away the most popular activity. But it´s not just for chitchat anymore. Secure E-mail services will have a big impact on the way businesses use couriers, overnight delivery services and even the humble fax machine. ... YYY, which recently went public, sells software that enhances electronic messages with cryptographic security, certified delivery and tracking, graphical capabilities and even customization features

Hence, advancement may be achieved by starting with an E-mail service. What is bad with E-mail (not considering add-ons with poor usability and integration)? No structure, only static document presentation (objected, e.g., by [2]), no adequate composition facility (the widely used MIME-approach, in my opinion, is not adequate – at least in independent E-mail services not plugged into Web browsers), handling of composed attachments (again, using the MIME-approach) is hardware/software platform dependent, no control on document real-estate, no multimedia, only little support in document composition for documentation purposes (you may reply with the initial message contained, yes, agreed), no adequate fill-in-the-form facilities for inquiries in a reply, only one-step workflow, only

limited routine attachments (I am not satisfied just by inclusion of sending time, return address etc. and automatic addition of a signature!). And, last but not least, no automatic binding together (in one "folder") of all exchanged messages related to one business affair.

To summarize what I think are mandatory requirements:
- Enforced document structure
- Advanced multimedia facilities (I have a broader understanding of the term *"multimedia"* as you will see in **section VI**) including control on document real-estate
- User interface integration (e.g., one kind of an editing functionality) following a traditional B2B paradigm
- Tool integration
- As much robust flexibility as needed
- Advanced documentation features (following *a "folder paradigm"*) – one business affair and one document folder exchanged –.

I think that the last mentioned requirement is a distinctive feature. A businessmen (usually) has to handle many business affairs in parallel. In an E-mail-like approach he will receive a bundle of unrelated messages which he has to sort out according what are the just ongoing business affairs he is presently involved in. So, he is interested to have them automatically bound in folders, each one covering one affair ordered in time of exchange.

Previous papers ([12], [13], [9], [15]) introduced these goals. Explicitly directed towards WWW technology Balasubramanian and Bashian conclude and demand in [1] a similar architectural result in addition supported by arguments of a sidebar [6] by Dennis.

VI.   THE *HOTXXX*-PROJECT; *MALL2000*

The *HOTxxx*-project[2] has its roots in work by Buchner ([3], [4]). His *HotDoc*-framework originally was thought as an advanced study and continuing development for systems like *OpenDoc*, *OLE*, or *OOE* for document composition. Manifold types of document parts with very different attributes going beyond pure text may be (hierarchically) composed.

There is a wide scope of document parts made available (if applicable, together with a specific functionality), e.g, (besides a text editor) containers in various levels, icons, running clocks, interaction buttons, and business graphics interlinked with a spreadsheet (see **fig. 4**).

In the scope of the *MALL2000*-project[3] the HotDoc framework has been used for a B2B application. For any business affair the correspondents utilize one structured *HotDoc* do-
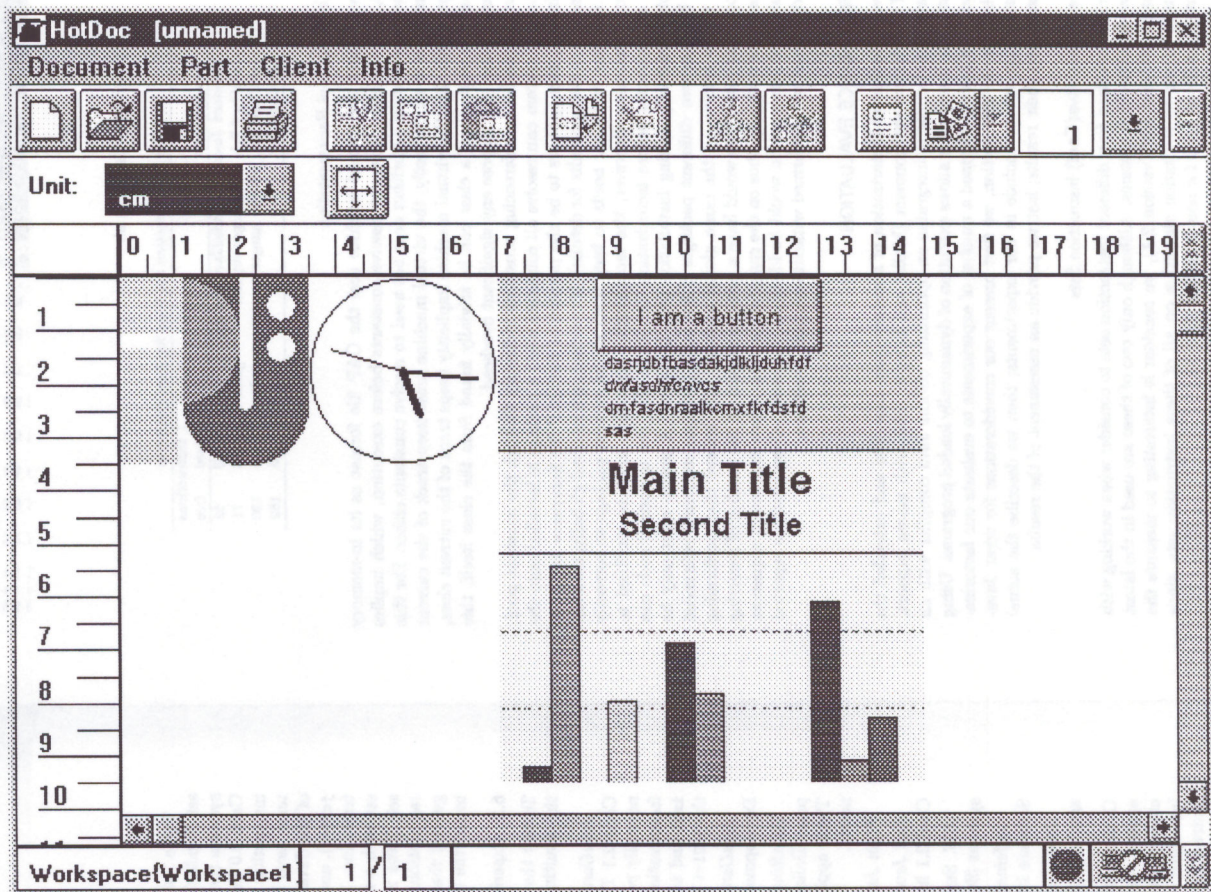
Fig. 4: A HotDoc-screenshot

cument (in the sequel named *DOC*). DOC is repeatedly exchanged between the co-operating businessmen and then individually handled as appropriate; it appears in the role of a <u>folder</u>, i.e., to document and to record all contributions of all involved correspondents to the affair at hand.

On the top hierarchical level there are *container parts* (i.e., parts specialized for the purpose to hold just one correspondent's contribution at a given time) in vertical, top-to-bottom arrangement in the real-estate space of the document. I call them *memos*. Each memo consists of three lower-level containers, also in vertical arrangement (and specialized for the resp. purpose), the *incoming link* with a fixed structure and contents, the freely usable *message body*, and the *outgoing link* again with a fixed structure and contents. The incoming and outgoing link-parts contain address information, possibly distribution lists, time stamps etc. These parts are provided and accessed by system routines only. A correspondent may only write into the message body of his memo, at will any available (non-specialized) document part(s).

Fig. 5 should give an impression how a business document looks like (as an example I will show, from the top level down, a negotiation about *Obtaining a car for a handicapped fellow-employee* as a considered business affair.

A memo utilized by a correspondent may in its message body contain not only text parts. As already mentioned there may be icons (e.g., a logo like the *MALL2000* or *PÜ* logo, resp., in **fig. 5**), tables (not shown), diagrams, figures, photographic pictures, video-clips, acoustic signals, real-time animation (the last three cases not yet implemented), The *HotDoc*-framework is able to handle (as far as we have already prepared drivers, homework still to be done) "data" of this kind as DOC-parts in manifold, presently used and standardized formats.

I cover more kinds of "data" with their appropriate functionality under the term *"multimedia"* [14]. Behind this I expect easier, consistent understanding of the document composition facilities following another old (1st) rule, here by Shneiderman [35], *"Strive for Consistency"*. More actual guidance in design questions may be found (e.g.) in [28].

One important feature, however, should be mentioned in the paper at hand, too, viz., <u>advanced planning and simulation facilities</u>, *HotSimple*. I cover it also under our broad definition of the term "multimedia".

A document exchanged between two correspondents (say A and B) may (e.g.) discuss in message bodies of some memos variant offers and delivery conditions for the business
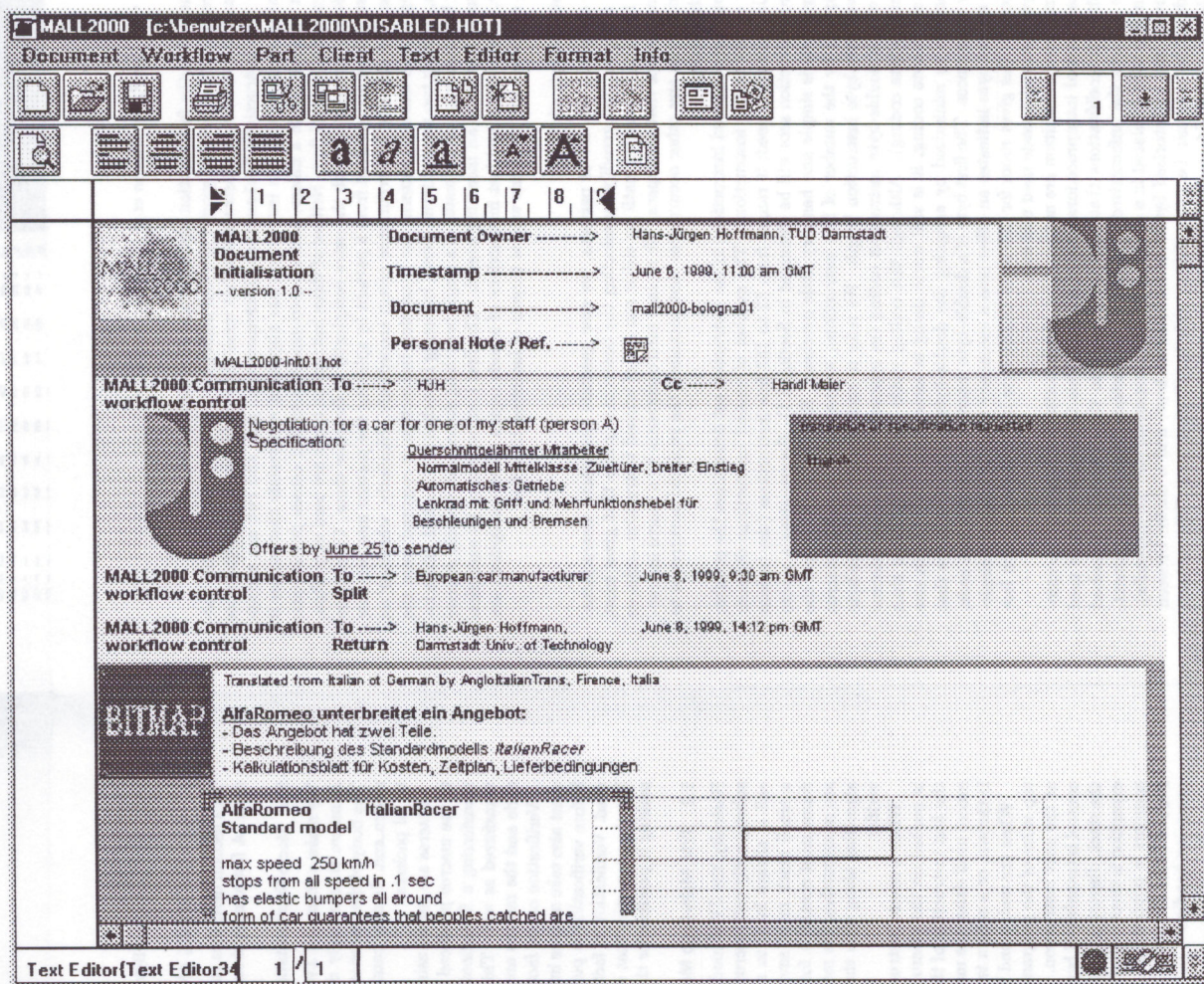
Fig. 5: A MALL2000-screenshot

affair considered; prices may be influenced by delivery dates. Of course, such variants can be covered by a number of exchanged memos. Inclusion of *HotSimple* developed by Kunstmann ([21], [22]) however, allows to provide an ad-vanced spreadsheet-like functionality in the first, reques-ting memo from A to be used for planning and simulation by B under the constraints functionally set up by A; B will finally sent back his consecutive memo with his decisions shown in the modified, now fixed functionality.

Another important topic is control of access rights to memos and/or message bodies, resp., contained therein. Of course, there have to be provisions to avoid access in a group of correspondents by competitive parties. Access rights (not yet implemented in all forms) may vary, reading, writing, limiting low-level access etc.

(Another topic not yet implemented is authentication).

The correspondent who initiated the business affair covered in DOC – I will call him *initiator* („T" for short) – will have an idea how the affair could/should be handled; who should be correspondent, in what step of DOC exchange he should be addressed, etc. T attaches a workflow part to DOC describing the planned flow of DOC between all the involved correspondents (as foreseen at this stage). The aforementioned ingoing (and outgoing) links support the workflow handling. A system component, *HotFlow*, controls future exchange of memos according to the plan. The planned workflow may change over time, so there has to be a rather flexible tool for establishing and updating the plan. Present research work by Handl [8] will realize this inter-company *MALL2000*-feature.

Document exchange between correspondents according to the actual stage in the workflow is taken over by a centralised control- and forwarding-agency in a server setting. The agency will also be responsible for schedule control and reminding some correspondent who missed a deadline.

Another feature of *MALL2000* presently researched by Martin [26] is intended to provide a routine-work-agency. For a memo received by a correspondent (say C), before manual handling by C, some routine work may be re-

quired. C may employ his individual, intra-company software/script-like „agent" for preparation, e.g, receiving an inquiry for an offer in the memo just handled, to access a product/service data base according to keywords found in the previously exchanged memos by I or other parties involved in the group of co-operating correspondents. The agency may automatically add company information to the message container and/or prepare the outgoing link when C has completed typing/arranging his message body and starts to submit the memo in the context of the DOC handled for sending back (or whoever is the next according to the workflow plan).

In this context also automated, intermediate involvement of a co-worker of C may be triggered by an action of the routine agent by an intermediate change of the workflow plan (e.g.) before C sees the contents of the received message body (now with the internal additions provided by the routine-work-agency and/or a co-worker) for final approval.

VII. CONCLUSIONS

B2B is an interesting, challenging development to advance regional and global trade between business enterprises. The expected turnovers are extremely high if developers succeed to provide acceptable system-/tool set-solutions for businessmen. I argue that the presently observed *hard support* has to be replaced by *helpful support* which is really of help for the businessmen. The thesis *"less is more"* demands an integration of all required functionality for doing B2B electronically in one uniform, reliable and robust system/set of tools under one mental paradigm.

Research work in the scope of the HOTxxx- and MALL-2000-projects done under my supervision is intended to help in development of such systems/tool sets. The features shortly presented in the paper should highlight how we concentrated our design work, oriented to minimize mental load of businessmen using the system/tool set, on required functionality in an integrated manner. I think that the old paradigm of document exchange is very helpful to achieve the goal.

Other application areas may be seen, in administrative document exchange in communities and government, exchange of patient records in hospitals between doctors, in all kinds of computer-supported co-operative work based on documents prepared/read/approved by humans

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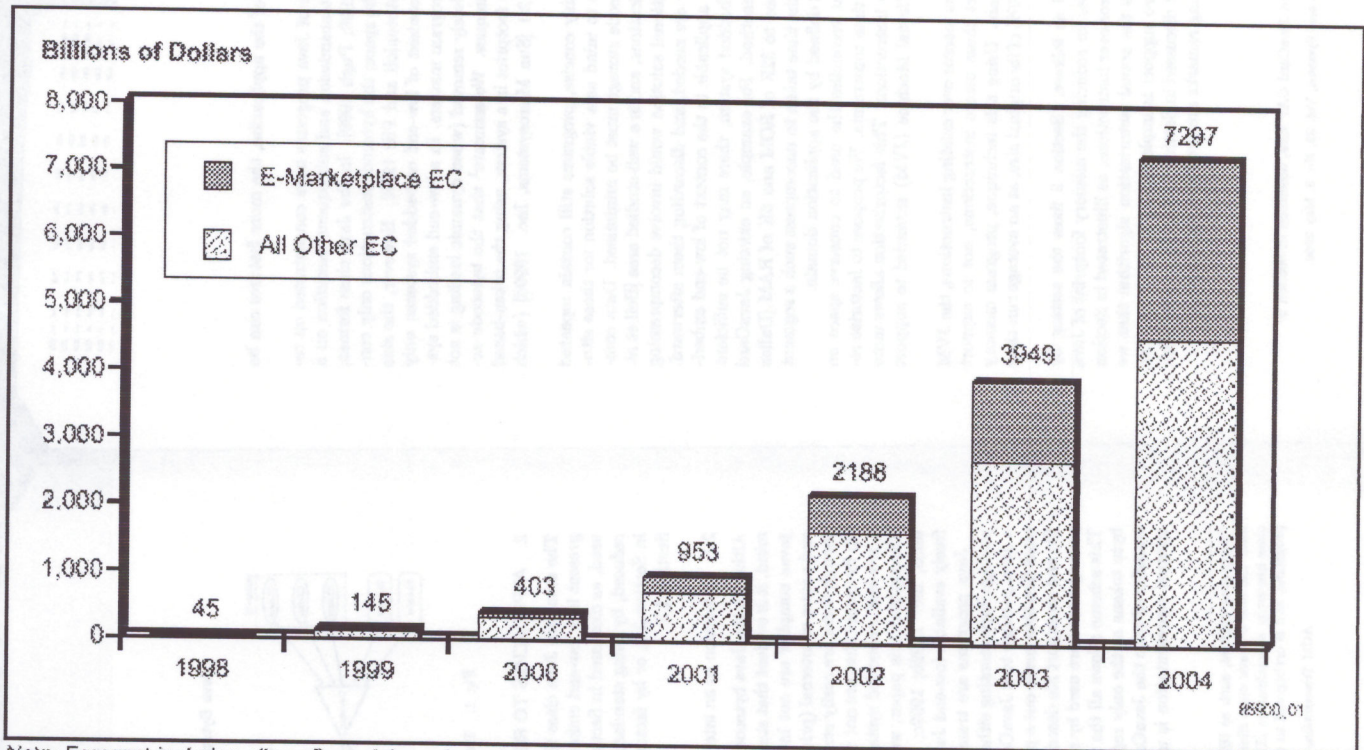
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Appendix 1

"Triggering the B2B Electronic Commerce Explosion"

Figure taken from Gartner Research Forecast [18]

GartnerGroup's B2B EC Forecast (Billions of Dollars)

Billions of Dollars

```
8,000

7,000                                                          7297

6,000     ■ E-Marketplace EC

5,000     ▨ All Other EC

4,000                                            3949

3,000

2,000                              2188

1,000                    953
              403
45    145
  1998   1999   2000   2001   2002   2003   2004
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86900_01

Note: Forecast includes all nonfinancial goods and services purchased and sold via electronic commerce.
Source: GartnerGroup (January 2000)

Appendix 2

Forrester Research: Execs still positive about B2B

Apr 03 2001: A new survey of senior business executives in the US by Forrester has found that the slowing economy is not dissuading them from doing business online.

Of those polled, 59 percent said they are "maintaining or heightening" their Internet efforts. They acknowledge, however, that they cannot succeed by standing alone: 85 percent said that working more closely with business partners and customers is a top priority in aiding them to achieve their business goals. Thirty-eight percent said specifically that such closer integration would "make or break" their business.

Forrester analysts say that these results show that technology is still vital for businesses working on improving their operations. Companies wishing to success now must engage in dynamic collaboration.

Slide 1:

"Less is more" in B2B

Hans-Jürgen Hoffmann
Darmstadt Univ. of Technology
Chair PÜ

SSGRR, August 7, 2001
(revised September 2001)

Slide 2:

What I want to discuss

- Are you still euphoric with B2B?
- *"Helpful support"* needed,
  no undesired *"hard support"*
- My thesis: *"Less is more"*
- *"Working with structured documents"*
  as basic metaphor of B2B
- *HOTxxx*-project ==> *MALL2000*

"Less is more" in B2B   2

Slide 3:

Are you still euphoric about B2B ?

Look to the next three charts !

"Less is more" in B2B   3

Slide 4:

GartnerGroup's B2B EC Forecast (Billions of Dollars)

"Less is more" in B2B   4

Slide 5:
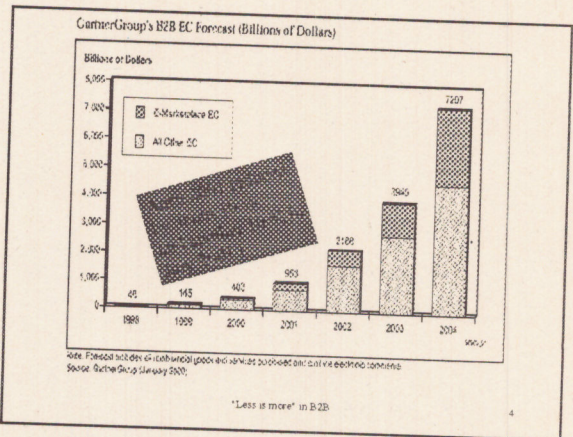
A revision of the Gartner Group forecast, dated July 16, 2001:
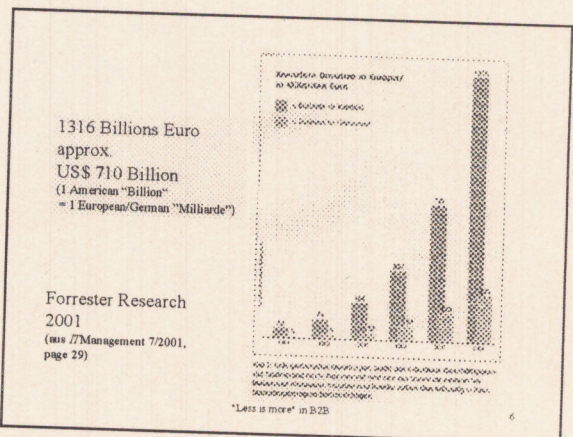
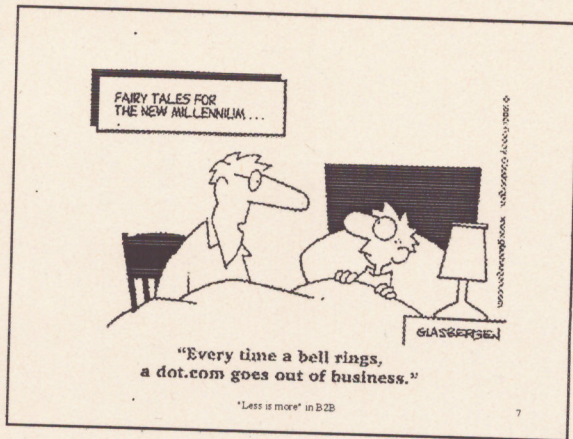**Worldwide B2B Internet Commerce to Reach $8.5Tr in 2005...**

...But Gartner Group lowers 2004 Estimate to $6Tr from $7.3Tr

$MM	1998	1999	2000	2001	2002	2003	2004	2005
	49,877	150,050	433,300	919,000	1,929,000	3,632,000	5,950,000	8,530,000
Year-over-Year Growth	n/a	201%	189%	112%	110%	88%	64%	43%

Gartner defines B2B Internet commerce as the sales of goods and services for which the order-taking process was completed via the Internet. This includes purchases via Internet EDI, e-marketplaces, extranets and other sell-side initiatives, but excludes activity over proprietary networks. Gartner's forecast is based on the value of B2B non-financial goods and services sold, resold and brokered over the Internet through establishments every time they are turned over. This is significantly higher than forecasts based on worldwide GDP, which includes only the value-added that establishments put into goods and services as they are sold and resold through supply chains

"Less is more" in B2B   5

Slide 6:

1316 Billions Euro
approx.
US$ 710 Billion
(1 American "Billion"
= 1 European/German "Milliarde")

Forrester Research
2001
(aus *IT*Management 7/2001,
page 29)

"Less is more" in B2B   6

Slide 7

FAIRY TALES FOR
THE NEW MILLENNIUM ...

GLASBERGEN

"Every time a bell rings,
a dot.com goes out of business."

"Less is more" in B2B

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Slide 8

Limoncello in Italy!

LEMINADE.COM

GLASBERGEN

"I'm one of the Top 100 dot.com companies
who are actually making a profit!"

"Less is more" in B2B

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Slide 9

Why are so much cartoons
available about
pitfalls of working with
computers ?

"Less is more" in B2B

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Slide 10

Needed support

Helpful support versus *hard support*

- **What are characteristics of B2B,
  an application domain?**
  - Procurement
  - supply chains
  - network of correspondents

==> *Searching*

    compare *Google* <==> *AltaVista* (see next pages)

==> *Planning and simulation*
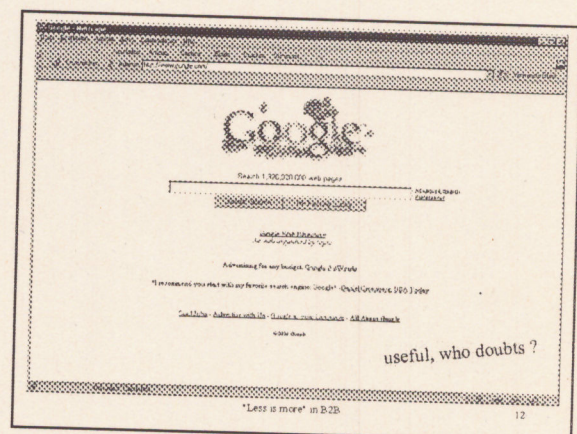
==> *Document preparation & communication*
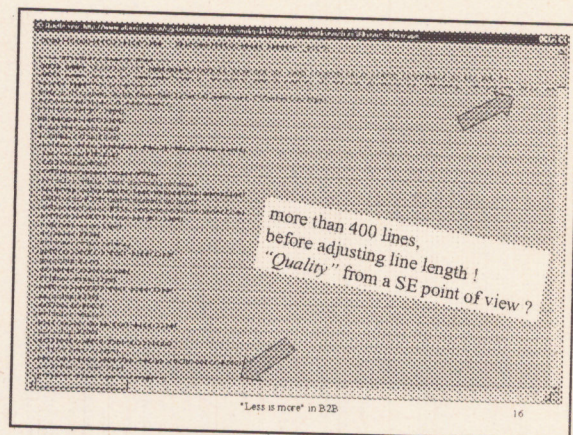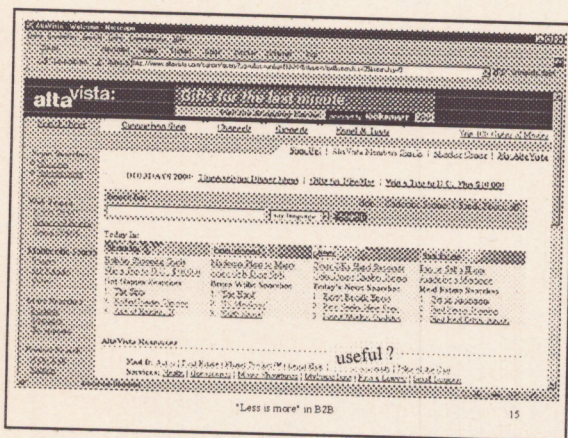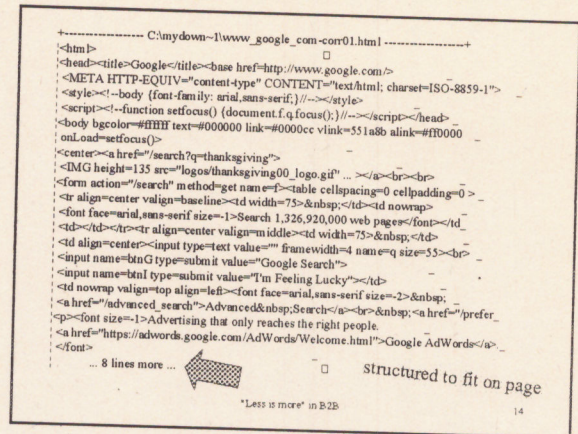
"Less is more" in B2B

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Slide 11
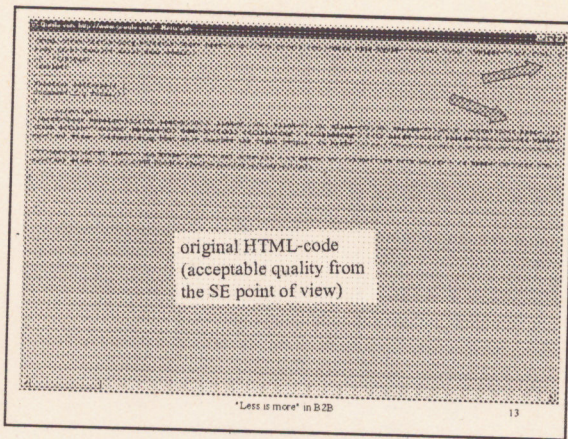
Take as examples for a
<u>search task</u>
the portals of two common Web sites
to exemplify my thesis
about *"less-is-more"* from
a software engineering (*SE*) point of view?

Thank you !

It is no advertisement for one
or the other search engine!

"Less is more" in B2B

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Slide 12

Google

Search 1,326,920,000 web pages

useful, who doubts ?

"Less is more" in B2B

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Slide 13:

original HTML-code
(acceptable quality from
the SE point of view)

"Less is more" in B2B   13

Slide 14:

```
+------------------- C:\mydown~1\www_google_com-corr01.html -------------------+
:<html>
:<head><title>Google</title><base href=http://www.google.com/>
:<META HTTP-EQUIV="content-type" CONTENT="text/html; charset=ISO-8859-1">
:<style><!--body {font-family: arial,sans-serif;}//--></style>
:<script><!--function setfocus() {document.f.q.focus();}//--></script></head>
:<body bgcolor=#ffffff text=#000000 link=#0000cc vlink=551a8b alink=#ff0000
:onLoad=setfocus()>
:<center><a href="/search?q=thanksgiving">
:<IMG height=135 src="logos/thanksgiving00_logo.gif" ...></a><br><br>
:<form action="/search" method=get name=f><table cellspacing=0 cellpadding=0 >
:<tr align=center valign=baseline><td width=75> </td><td nowrap
:<font face=arial,sans-serif size=-1>Search 1,326,920,000 web pages</font></td
:<td></td></tr><tr align=center valign=middle><td width=75> </td>
:<td align=center><input type=text value="" framewidth=4 name=q size=55><br>
:<input name=btnG type=submit value="Google Search">
:<input name=btnI type=submit value="I'm Feeling Lucky"></td>
:<td nowrap valign=top align=left><font face=arial,sans-serif size=-2> 
:<a href="/advanced_search">Advanced Search</a><br> <a href="/prefer_
:<p><font size=-1>Advertising that only reaches the right people.
:<a href="https://adwords.google.com/AdWords/Welcome.html">Google AdWords</a>_
:</font>
: ... 8 lines more ...                          □   structured to fit on page
```

"Less is more" in B2B   14

Slide 15:

useful ?

"Less is more" in B2B   15

Slide 16:

more than 400 lines,
before adjusting line length !
"Quality" from a SE point of view ?

"Less is more" in B2B   16

Slide 17:

Needed support

Helpful support versus *hard support*

- **What are characteristics of B2B,
  an application domain?** See later for another example

- Business people are <u>no</u> computer freaks !

- Offer proven interaction support !
  No surprises !

- Give business people success by what they
  know and what they are able to do !

"Less is more" in B2B   17

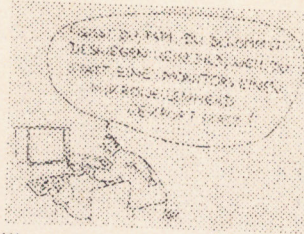Slide 18:

Needed support

Helpful support versus *hard support*

- What are characteristics of B2B,
  an application domain? See later

- **Business people are <u>no</u> computer freaks !**

- Offer proven interaction support !
  No surprises !

- Give business people success by what they
  know and what they are able to do !

"Less is more" in B2B   18

- "Dad, well, you will see no Web page as you bought a micro-wave oven instead of a computer monitor !"

"Less is more" in B2B
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"This computer doesn't make me lonely (for I always need someone who helps me with the confounded thing)"

DIESER COMPUTER MACHT NICHT EINSAM
(DENN STÄNDIG BRAUCH ICH JEMAND, DER MIR MIT DEM VERFLIXTEN DING HILFT)

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Needed support

Helpful support versus *hard support*

- What are characteristics of B2B, an application domain?
- Business people are <u>no</u> computer freaks !
- **Offer proven interaction support !
  No surprises !**
- Give business people success by what they know and what they are able to do !

"Less is more" in B2B
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Proven interaction support

- Textbooks by Ben Shneiderman and others
- Bi-weekly *"alerts"* by Jakob Nielsen
  (http://www.useit.com/alertbox/); <u>an example</u>, July 22, 2001:

Well-designed B2C sites can easily explain their products and services in text that is short enough that users will actually read it online.
  XXX.com, for example, tells us in its tag-line to
        "Search the largest inventory of cars and trucks on the Internet.
        More than 1.5 million listings, updated daily."
  Given this information, most people can figure out what the site does.

Relative to B2C, most B2B sites sell products or services that are much more complex and have less connection to everyday experience. Summarizing a website's purpose is thus much harder in B2B than in B2C.
    That's why they pay copywriters the big bucks, or so you would think.
    On closer examination, it seems that most sites pay their copywriters
    to obscure the site's purpose rather than state it clearly.

"Less is more" in B2B
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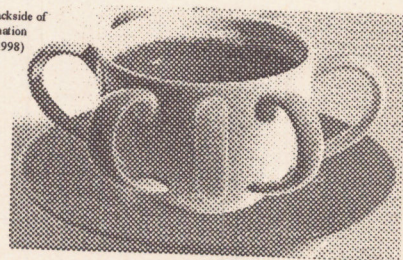---

(Computer Zeitung, 2. August 2001)

No *"Babylon"*; look for <u>one</u> metaphor/model/method/language/tool

"Less is more" in B2B
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(Picture from backside of a product information request card, ~ 1998)

No *"redundancy"*; look for <u>one</u> appropriate solution for interaction
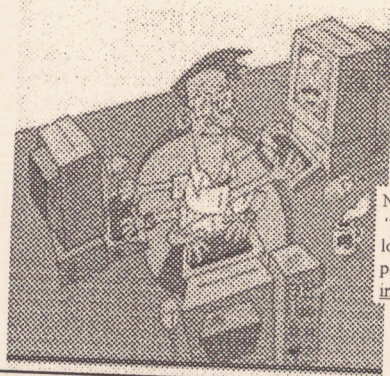
"Less is more" in B2B
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Realize users´ tasks; no *"labyrinth"* of tricky paths with many surprising steps for reaching the goal

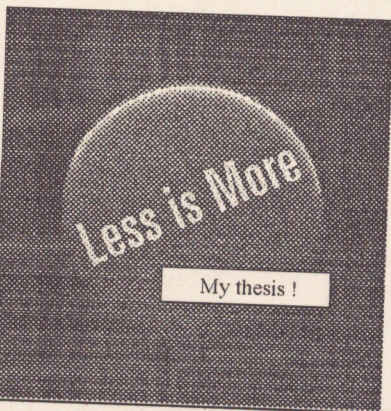*"User-oriented design reduces costs"* (announcement of a seminar, 1999)
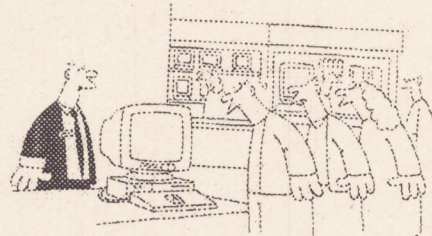
"Less is more" in B2B

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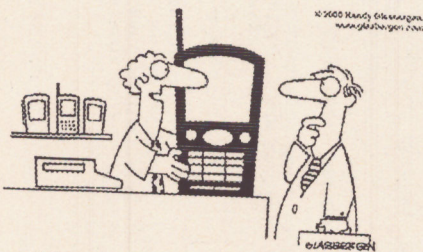No *"hurly-burly"*, look for powerful integration

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My thesis !

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"It's the most user-friendly keyboard of the world"
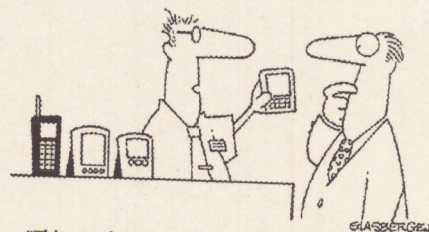
"Less is more" in B2B

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"It's an Internet-ready, tri-mode, LCD color, MP3 compatible, digital wireless communicator. We make them extra big so people will notice how cool you are."
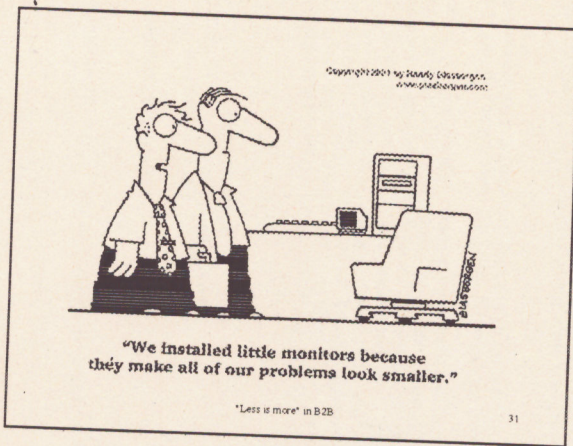
"Less is more" in B2B

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"This one doesn't do anything. It's the perfect gadget for those times when all you need is a little peace and quiet."
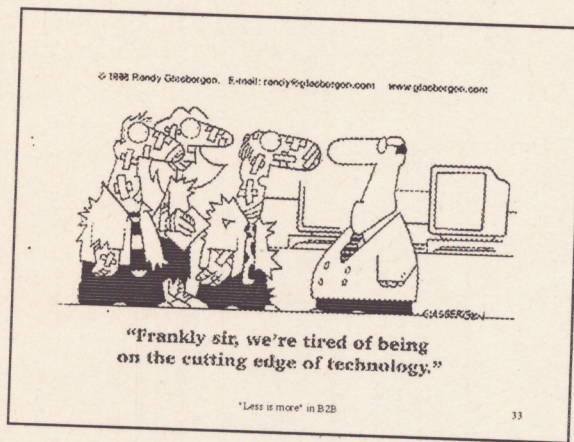
"Less is more" in B2B

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5

"We installed little monitors because they make all of our problems look smaller."

Famous, well-known *"Minimalists"*

- Niklas Wirth
  (*Lilith*-Operating System with all what you really need as a computer specialist or business expert in about 256 Kbytes !)
- Jakob Nielsen
  (Web design recommendations guaranteeing state-of-the-art HCI approaches based on reasonable state-of-the-art soft- and hardware for any kind of EC-applications !)
- The (anonymous) designer of the *"Less-is-more"*-sticker (which I showed you before)

"Frankly sir, we're tired of being on the cutting edge of technology."

Cartoonists often say the truth isn´t it !

Needed support

Helpful support versus *hard support*

- What are characteristics of B2B, an application domain
- Business people are <u>no</u> computer freaks !
- Offer proven interaction support !
- No surprises !
- **Give business people success by what they know and what they are able to do !**

What are characteristics of (traditional) B2B ?

- Sitting on your desk, communicating with your business correspondents, going to a meeting, making notes, planning/simulating, filing, etc.
  - using paper and pencil -
- I.e.,   handling and exchanging (structured) documents

Working with structured documents in B2B

- E-mail   ==> unstructured
- Meeting, phone calling, fax exchange
  - ==> correspondent(s) to be "synchronized"
  - ==> time consuming
- Web catalogues   ==> missing interaction
  - ==> lost in information space
- Pocket computer, word processor, spreadsheet
  - ==> no integration
- Diagrams, "multimedia" etc.
  - ==> not supported

"Less is more" in B2B   37

HOTxxx-project & *MALL2000*

- Ongoing (research) work of Chair PÜ of TUD since 1995
- *HOTxxx*-project:
  - *Document processing in general*
- *MALL2000*-project:
  - *Application in B2B*
  - (part of EC-funded INCO Copernicus project #977041)

We try to give business people success by what they know and what they are able to do !

"Less is more" in B2B   38

Hotxxx- (and *MALL2000*) basics

- <u>One</u> structured document for <u>one</u> business affair
- Correspondents exchange and work <u>only</u> with such a document (per affair)
- Document *"parts"*, (hierarchically) ordered in *"containers"*, multimedia functionality
  - Ask me for a demonstration ! -

"Less is more" in B2B   39

Hotxxx- (and *MALL2000*) status

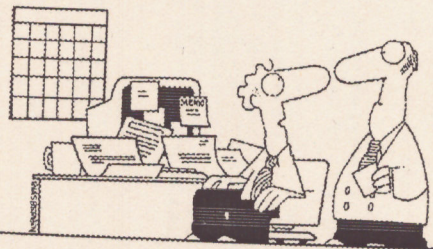Presently ongoing work for inclusion of:

- Simulation & planning document part (*"HOTSimple"*),
- Inter-company workflow control attachment (*"HOTFlow"*),
- Intra-company routine work support (*"HOTAgent"*).

"Less is more" in B2B   40

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"My screen is hard to read. Can I have a bigger monitor?"

"Less is more" in B2B   41

Final remarks

- Further possible application fields (of *HOTxxx*):
  Project-planning-/-negotiation-/-implementation-/-control,
  Medicine,
  General engineering (eg., Civil Engineering),
  All kind of *"virtual communities"* in cooperative work,
  Administrative cooperation
- *"Less is more"* metaphor exemplified
- Computers and communication systems should give users *"helpful"* support

"Less is more" in B2B   42

Contact

Univ.-Prof. em. Dr.-Ing. Hans-Jürgen Hoffmann
Darmstadt Univ. of Technology
Dept. of Computer Science, Chair PÜ
Wilhelminenstr. 7, D-64283 Darmstadt, Germany

HJHoffmann@ACM.org
http://www.informatik.tu-darmstadt.de/PU/welcome_e.htm

"Less is more" in B2B

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Literature

http://www.informatik.tu-darmstadt.de/PU/Projekte/

"Less is more" in B2B

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