Research objectives and method

Introduction
The user-friendliness of the Internet is reaching a stage in which it is no longer an ordeal to retrieve even the simplest information from the vast database that the net is offering. Although the Internet is still confined to the boundaries of the personal computer screen, this will soon be past tense; it is now clear that the Internet is definitely going to be a medium for the masses. As soon as the vast majority of a society has access to the Internet and is growing to be accustomed to use this new medium, the basic drawback for the use of the Internet for market research – the lack of representativity – disappears. In that case, the Internet promises to be a useful tool for researchers to obtain information from respondents who may live in different parts of the country or of the world, in a simple way and at low costs.

The Internet is drawing a lot of attention, not only from companies who want to communicate to a broad audience, but also from market research companies. It seems that quantitative on-line market research at this stage is ahead of qualitative on-line research. Perhaps quantitative researchers are more familiar with finding hardware and software solutions to research problems, or maybe structured interviews are easier to conduct through the net than open, qualitative interviews.

Using the World Wide Web to conduct international qualitative market research will certainly offer speedy delivery of results at relatively low research costs, but will the results be valid and reliable comparing them to standard qualitative research?

This paper concentrates on the question of what the World Wide Web has to offer to qualitative market research, particularly in an international context, as the Web does not know the limitations of geographical distances and boundaries. This fact leads to a number of interesting opportunities to conduct international research quickly and at relatively low costs:

Keywords
Internet, Market research, Validity, International marketing, Domestic appliance industry

Abstract
This paper describes an experimental study into the validity and reliability of international qualitative market research through the Internet. Is it possible to generate valuable and valid qualitative market information from several countries, on the basis of on-line research organised from one country? The results of face-to-face research and on-line research in Singapore, the United Kingdom and Sweden are compared. The study clarifies the opportunities and limitations in using this type of market research in an international context.

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Currently, qualitative researchers often have to travel to countries in which research is conducted, briefing local moderators and viewing some groups or interviews to get a grasp of the local habits and attitudes. This leads to high traveling costs and increases the time needed to execute the fieldwork. It usually takes one or two weeks to recruit the respondents, and one or two weeks before the analysis can start.

In on-line research, the respondents can be recruited and interviewed from any computer anywhere in the world. Everyone who is connected to the Internet knows how to use chat programs, speaks English and types at a reasonable pace may be interviewed, irrespective of location of residence. Fieldwork may start two days after the briefing, and the analysis may start right after the last interview on the basis of complete and accurate transcripts with each comment linked to the respective respondent.

The advantages of on-line international research are apparent. Until now, not much is known about the strengths and weaknesses of the on-line research approach compared to the currently used standard research methods. We are convinced that it may develop into an important research instrument, particularly in international market research, provided that the new approach is sound from a methodological point of view.

Research objectives

The objectives of this study are to:

- compare the results and research process of on-line groups and face-to-face groups in order to determine the strengths and weaknesses of both methods;
- determine whether typically qualitative techniques can be used effectively and efficiently on-line to answer the question of whether on-line groups yield enough qualitative depth of insight.

The research format will help us reach a better understanding of on-line qualitative interviewing. On-line interviewing will be particularly interesting in international research due to the high speed and lower costs, provided that the approach leads to valid and reliable results. Cost and speed do not legitimise on-line results if these results cannot be trusted. On the other hand, if the results are comparable, on-line international research will definitely be increasingly used in the future. The gain in speed and cost reduction will be particularly high if the qualitative research is centrally organised and conducted, which is the case in this research. The study at hand will therefore offer valuable insights to both researchers and research clients.

Method

For this research it has been decided to conduct a qualitative product concept test. Philips Domestic Appliance Products, in The Netherlands, had been asked to provide a product concept, preferably a new shaving concept. The typical profile of the Internet user is still dominated by the younger, higher-educated male. A shaver, being a typical male product, therefore, seemed to guarantee successful recruitment via the Internet. Of course the public character of the paper posed limitations to the concepts to be provided. Due to these limitations, Philips was prepared to supply us with a different kind of product concept: a new type of thermometer. This “infrared temple thermometer” uses the same kind of technology as the Braun infrared ear thermometer, but uses the temple as the location for measurement instead of the ear.

Although at first we were worried that the target group for this product (parents of younger children, both men and women) would be harder to recruit through the Internet, the new concept also offered a clear advantage as well. Earlier experimental research (internal Research International publication “Conducting Internet focus groups in The Netherlands”) in which on-line advertising was tested, showed that the combination of the specific target group (young males) and subject (advertising) created such a light-hearted atmosphere in the groups that the study tended to end up in a chat instead of a serious discussion. A childcare product was expected (and proved) to be a much too serious subject to make fun of.

Three countries have been carefully selected for specific reasons, offering insight into several aspects of international on-line market research: the UK, Sweden and Singapore. Table I summarizes the types of research envisaged for each country.
In this way, the following comparisons can be made:

- on-line groups vs face-to-face groups (all three countries);
- on-line research in countries in the same region as The Netherlands vs a more distant culture;
- on-line groups vs face-to-face groups in another culture (The Netherlands – Singapore) vs on-line groups in the same country (Singapore – Singapore);
- on-line groups vs on-line singles;
- on-line English native speakers (UK) vs on-line non-native speakers (Sweden).

In the current project status, while preparing this paper for the conference, only part of the single interviews have been realised and several attempts to realise a focus group in Sweden have failed because of line malfunctions and non-attendance of respondents. However, all the other groups have been realised and therefore the focus in this paper will be on the first three comparisons.

The face-to-face groups and on-line groups lasted two hours. The on-line groups, with consumers from each of the three countries mentioned, have been organised from the local office in Rotterdam, The Netherlands, and were conducted by Dutch English-speaking moderators.

All moderators based their discussion on the same discussion guide, which comprised the following areas:

- attitudes and behaviour towards fever;
- usage and knowledge of different types of thermometers;
- strengths and weaknesses of these thermometers and attributes of the ideal thermometer (evaluation of attribute list);
- evaluation of the new concept (first written description, then visual);
- image of manufacturers of domestic appliances (using personalisation techniques);
- communication, perceived price levels, buying intentions.

Slightly more than half of the respondents in the sample are women. Women have been included in the research because of their supposed caring role in the household, men because of the technical aspects of modern digital thermometers that might appeal to them. Because of their specific roles, we used mixed groups to allow respondents to clarify the role of gender in the process of using and buying thermometers. All respondents had at least one child less than 12 years of age.

To be able to have a fair comparison between the face-to-face groups and on-line groups, the samples have been matched with respect to gender, but also on characteristics such as speaking English, and using the Internet regularly.

### On-line interviewing: using chat program ICQ

ICQ (pronounce “I seek you”) is a chat program which was developed five years ago by a small Israeli software development company. In this program, chat partners are spotted (by using search criteria like first/last name, nickname or ICQ number) and asked for authorisation in order to add them to the personal contact list by sending an on-line message. Once added to this contact list the program offers the unique advantage of instantly detecting which contacts are on-line.

It is possible to send e-mails, files, messages on- or off-line and request members of the contact list for a chat. In a few years’ time, the program has turned into a very successful, user-friendly and versatile program.

This chat program has been selected for this study for several reasons:

- the program is currently used by roughly 30 million Internet users throughout the world, offering vast opportunities for recruitment;
- the possibility to send files, e-mails and site addresses (URLs) enables researchers to send visual stimuli, an essential condition for most concept tests;
- respondents can be located by using search criteria such as location, gender, age, language as well as personal interests (for those respondents who filled in this information in their personal profile).

<table>
<thead>
<tr>
<th>Face-to-face</th>
<th>On-line, based in</th>
<th>The Netherlands</th>
<th>On-line based in local country</th>
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<tbody>
<tr>
<td>United Kingdom</td>
<td>2 groups</td>
<td>1 group, 10 singles</td>
<td>1 group</td>
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<tr>
<td>Sweden</td>
<td>2 groups</td>
<td>1 group, 10 singles</td>
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<tr>
<td>Singapore</td>
<td>2 groups</td>
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Table I Sample structure

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Structure of this paper
The results have been divided in three main parts. First we will discuss in detail our experiences with on-line qualitative research in the three countries as conducted from the Rotterdam office. For each research phase we will focus on practical and methodological opportunities and limitations related to this type of research. Second, we will discuss the differences in outcomes (conclusions and recommendations) between the on-line groups and face-to-face groups. Third, we will present a framework of conditions for optimising on-line qualitative research and suggest fields of research which lend themselves well for an on-line approach.

Preparing on-line groups and interviews
Recruitment of respondents
The ICQ chat program creates very powerful tools to recruit respondents quickly and easily in other countries from any computer in the world[1]. User lists were inspected as well as the so-called “white pages”, containing the personal profiles of users, by inserting relevant search criteria. Users who appear to be on-line can be interviewed immediately or an appointment can be made for the interview to take place at another time. The fieldwork, therefore, can start immediately after the interview guide has been developed.

Respondents who are reluctant to participate can be sent files with a description of the research agency and of the study at hand. In addition, they can easily be invited to surf to the Internet site of the company, confirming the integrity of the company and true intentions of the researchers. Those ICQ users who filled in personal details in their user profile did this without knowing that they were going to be recruited for the interview, giving some reassurance that they do not present themselves differently from who they are.

In practice, however, the recruitment did not take place as smoothly as the above suggests. Finding people who meet the criteria was easy, but most ICQ users appear not to be on-line every day, probably not even on a regular basis. The following problems have been encountered:

- Respondents are not on-line on a day-to-day basis and/or do not use ICQ regularly. Only a small percentage of the ICQ-users of user lists responded to our request by e-mail.
- As in all databases, many addresses may not be used or no longer valid.
- Many respondents did not grant our request for authorisation to add them to our contact lists.

Although the above-mentioned difficulties only meant that the recruitment cost more time than we primarily thought, the following problem was much more annoying: many respondents did not show up at our on-line group at the agreed time. Some respondents appeared to have misunderstood the starting procedure (waiting for a phone call instead of just getting on-line), while others stayed away because they felt that another activity was more important or they simply forgot about the appointment. As a telephone number was not available (privacy), there was no way to reach the respondents and remind them of the appointment. In Sweden, three attempts to conduct a group discussion failed, while one failed in the UK. The Singapore respondents for both the Dutch as well the Singaporean moderation had been recruited by telephone from our office in Singapore, and in both cases all or nearly all of the respondents showed up! In our opinion, therefore, respondents can be best recruited in the traditional way and not through ICQ.

Starting the group
In most face-to-face focus group situations, all respondents are simultaneously shown into the room. The moderator enters the room and instructs those present about the how and why of the group. The starting-up process can easily be guided and controlled by the moderator (except for late arrivals). In an on-line focus group situation, respondents arrive at uneven intervals and they start chatting with each other. Each respondent’s colour adjustment of their own screen may lead to barely readable combinations at the other side. The starting up phase may take between 15 to 30 minutes before everyone is present and ready to start. This process may be improved considerably by having a separate “entrance chat room” managed by a system operator who checks the respondent’s criteria for admission, adjusts colours and asks for a short personal profile. Once everyone is present and ready, the “sysop” leads the
respondents to another screen where the moderator awaits them and starts the group.

Several displays can be adjusted to suit the preferences of the user. For instance, one main field with a list of all comments of group members, or split fields which offer the opportunity to see the respondents type their sentences in real-time. The display configuration which is split up in four to six ways, depending on the number of respondents, is most effective in giving the feeling of a discussion, although it takes some practising to be able to follow what is being typed. Figure 1 gives an example of what a split up display of an on-line group looks like.

Although it takes some time before all respondents are ready to start the group, a typical advantage of on-line interviewing is the fact that hardly any “warming up” is needed to put respondents at ease. Because of the relative anonymity of the situation and the fact that respondents can participate in the group from their own homes, respondents feel comfortable right from the start.

Conducting on-line research: process characteristics

Interaction process during the discussion

The process of on-line interviewing is quite different from face-to-face interviewing. There are differences in atmosphere, in keeping control of the discussion, the fluency in the discussion, and generating deeper insight. In this paper we will restrict ourselves to the most important elements which determine the validity of the outcomes.

All three moderators who conducted on-line groups complained that they had difficulty in following the developments in the discussion. Each respondent’s display has to be scanned quickly and continuously to see if and what answers are given (to which questions). To be able to do this and stay on top of the discussion, the moderator has to remain very concentrated during the whole discussion. Although respondents are inclined to respond primarily to the moderator (with interaction between respondents typically being lower compared to face-to-face groups), the moderator still has the feeling that the discussion lacks the natural flow and coherence of the face-to-face group. There are several reasons for this, which will be explained in detail in the following paragraphs.

Synchronising questions and answers

In a face-to-face group, the moderator is able to sense what is happening in the silence after placing a question. Are respondents distracted, are they blank, or are they just thinking about the question? If the moderator notices that a relevant answer will not come up, he can rephrase his question or think about another angle to tackle the topic. Once the first respondent starts answering, he is
generally given enough time by the others to formulate his answer, which, assuming that the answer is interesting and relevant, may take some time without other respondents protesting.

In on-line groups this regulating mechanism, guided by eye contact, is absent. If a question is put to nobody in particular, all group members start answering. Staying away from the screen too long may mean two things, that one has no opinion at all or that a long and interesting answer is being formulated. The on-line question tends to evoke more and shorter answers, because the respondents want to show that they do have an opinion, but hesitate to hinder the flow of the discussion by typing longer answers. After the moderator has interpreted the answers, he may rephrase his question and probe further, but the whole process of waiting until all answers are given and probing for more information obviously takes much more time compared to face-to-face interviewing, both in groups as well as in single interviews.

Another related problem is that respondents who type slowly or are distracted give answers to previous questions, hindering the transparency of the discussion.

The four-to-six way split screen display gives more moderation control than the large screen mode. When respondents are half way in formulating a sentence, a moderator can already start to respond to that answer or even react on two different responses one after another. Choosing this display set-up, however, means limiting the group size for practical reasons. One moderator and three respondents lead to a four-split screen that is feasible to follow. Five respondents is the limit. Although a group of three respondents sounds small, this is partly compensated by the fact that on-line groups tend to generate more answers per respondent. Of course, the problem of synchronisation is hardly existent in single interviews.

Another way to enhance the fluency in the discussion is to urge respondents to give a sign that they do have an answer coming up but that it will take some time (for instance, “think . . .”). They should also be told to type and send their answer even if others have already given the same reaction.

**Fluency of the discussion**

Typing skills are a basic condition to obtain a fluent discussion. Respondents who cannot type reasonably well tend to stick to shorter answers, giving less rich information. To obtain a fast and lively discussion, it is clear that respondents should have good and preferably equal typing skills. In an international research context, the element of language fluency is even more important to take into consideration. The Swedish responses showed, as could be expected, less richness in wording but, more importantly, the answers took more time and tended to be shorter. Although both moderators and the Swedish respondents were enthusiastic about the fact that they were able to communicate with people in a different country so easily, the high level of responses typical for qualitative research are not met. Particularly with respondents who are not fluent in English, the richness of the reactions and the speed of the interviews drops considerably. Because the respondents need more time to formulate their answers, less time remains to probe for deeper insights, leaving the moderator with only a rough idea of what the respondents wish to express. On the other hand, most interviews with Swedish respondents are of a surprisingly high level and certainly not inferior to the interviews with English respondents.

Both moderators as well as interviewers feel an urge to keep the discussion going, thereby increasing the speed of the interactions. The results prove, however, that it is important for the moderator to keep the pace slow. Compared to a face-to-face situation, respondents need more time to express their thoughts. Placing questions too fast, one after another, makes the respondent feel that short and speedy answers are requested. When the respondent is given more time, it appears that the answers grow lengthier, and more informative and interesting!

**Reaching deeper levels of insight**

The non-verbal signals in face-to-face groups are not only used to distribute questions and responses, but also to:

- urge individual respondents to give more information or explanations on what they intend to say;
- use coercing looks to keep the tension high, or the opposite: use relaxed looks to inform the group that everything is going fine and that the group is performing well.

In the on-line groups it proves to be quite difficult to ask for deeper meanings or
motivations. Some group members feel that the moderator is trying to “elaborate the obvious”, as they are not used to introspect their own opinions to such an extent. In this study it appeared to take quite some time to bring respondents to a state in which they are willing to take the time to search for their own inner feelings, not because they do not want to, but because they are not used to. We are convinced that searching for deeper levels in on-line research is not impossible but that it just takes relatively more time. This is probably caused in part because on-line respondents feel less tense and involved, less eager to show their self-reflective capacities compared to a face-to-face situation.

To avoid the discussion becoming less focussed, we recommend that group discussions last one hour or a maximum of one-and-a-half hours to avoid respondent concentration problems. A tool for the moderator to keep the discussion focussed is to keep a good balance in using encouraging, relaxing and disciplinary emoticons. In one group discussion, emoticons were used repeatedly, which created a friendly atmosphere in the group. These emoticons can be chosen from a pull-down menu, clicking transfers the emoticon to the text screen. To give some examples of emoticons: “John laughs hysterically, pounding fists and feet on the ground”; “Elisabeth grins mischievously”.

Group cohesion and interaction
Although the respondents in the on-line group say that there is more cohesion in an on-line focus group than in a chat, they feel that a face-to-face group definitely creates a more serious and “real” feeling of participating in a group. Although respondents in a face-to-face group seem to be more involved and ready to think seriously and deeply about questions they would normally not think about, the more playful atmosphere in the on-line group also has positive influences on the group as well. Social codes which determine the informal leader in the group who can claim most of the discussion time (such as clothes, hairdress, gestures, the use of voice – i.e. paralinguistics) are absent in an on-line group. This leads to a kind of leveling out of the hierarchy in a group, probably even more compared to a group discussion by telephone, because here the paralinguistics are still important signals of status and authority. The on-line group, therefore, is a very “democratic” group offering more room for shy respondents to participate on a basis of equality. The factors that determine status in the group are purely linked to language and intellect: vocabulary, ease of formulating and typing, creativity, having an own vision on topics.

For the moderator, this means that he has less difficulty in balancing the group. It takes more effort to keep the members involved and focussed on the topic of investigation, but he does not have to encourage quiet people and pacify the noisy ones as in a face-to-face group. Encouraging in a face-to-face group means helping people cross social psychological thresholds, whereas encouraging poorly performing respondents in an on-line group is less useful because respondents are not able to be more creative or eloquent than they are. The only thing a moderator can do is give an on-line respondent more time to formulate their answer.

We think that group cohesion and the willingness of respondents to treat an on-line group with more respect than a chat is enhanced if the respondents know what is expected from them. If they previously joined face-to-face groups, they know what kind of questions may be asked and what a moderator will do or will not do to gain deeper insight into a subject. The basic rules of a face-to-face group will help them work more efficiently in an on-line group.

Interaction between group members
The on-line focus groups seem to generate less interaction between members than the face-to-face groups. Discussions between respondents occur, but they are less clear and coherent. This is basically a problem of timing and overview.

The responses often are not logical chains of reactions in which one reaction elicits the other:

- sometimes one question elicits reactions from several respondents at the same time;
- sometimes reactions relate to previous questions or remarks from others;
- sometimes people react on each other’s remarks without the moderator rounding up or summarizing what has been said,
thereby leaving behind the idea that the discussion was not relevant;

- sometimes it is not clear whether other respondents are not able or not willing to enter a discussion, so it is harder to get the feeling “here we have something”.  

One of the most important causes of the lack of interaction is a very simple one: time pressure. At first we used the same discussion guide on-line as well as in the face-to-face groups. The guide had been developed on the basis of a two-hour face-to-face discussion, following the usual routing and content for these types of groups. In practice, it appeared that we did not have enough time to even ask each question once. There was no time for probing. Even when we skipped one-third of the questions, there was no time for probing. Only when we left out nearly half of the questions was enough time created to be able to probe for deeper insight. Even in those cases we had to stimulate interaction by prompting the respondent with questions like “Jim, what do you think of the answer Louise gave on this question?”. Interaction between respondents can be increased by creating enough time for probing, but also by inviting respondents to react on each other’s comments. If the moderator wants interaction after the respondents typed in their answers, he should explicitly indicate that respondents may react to others instead of waiting for the next question of the moderator. One way to improve this process is by developing a set of “probing icons” which could drop standard questions into the discussion field by simply clicking icons like:

- “Any further comments?”
- “Do you agree with what is being said?”
- “Could you explain what you mean in further detail?”

Using associative techniques
An important objective of this study is to learn about the possibilities of using creative techniques that are typically used in qualitative research. Do respondents understand what kind of answers we would like to hear? Are they able and willing to respond to types of questions which, to say the least, may look quite odd to them in the first instance?

The results show that respondents are surprisingly co-operative in working with associative techniques. We asked them to personalise three internationally known domestic appliance brands: “What would these brands look like if they would be human beings – age, gender, profession, appearance, clothes, personal interests?”. We also used the “party-mapping” technique: “Suppose these brands would organise a party, who would be the spark plug on the party, who would be the silent type, who would be talking to each other, etc.?”. Apart from the fact that the techniques take relatively much time to execute, the results are valuable and interesting. Most respondents did not feel any difficulty in answering these questions and clearly enjoyed this fantasy game. Moreover, these techniques, which in face-to-face situations work better in groups, appeared to work in single interviews as well. Probably, the anonymity of the interview setting takes away thresholds and makes respondents feel free to fantasise without the fear of looking odd. To give an example of the reactions in a single interview with an English woman:

Moderator: What image do you have of the Braun woman/man?
Sue: Blonde, probably tall, confident, tends to dress in suits, would have a German car – a Mercedes or BMW – probably the latter. He will probably have a physical hobby, anything in which he can show off his confidence, so sports.

Moderator: Now about Philips, could you give me a picture of Philips?
Sue: Well, this person is more likely to be dark-haired, medium height, again confident, but not overwhelming like his Braun colleague . . . umm, think he will have a top of the range car that is not ostentatious and shouts money! I think this person is going to be more a family person.

The outcomes clearly show that respondents can associate not only on a product level but also on a brand/lifestyle level, shedding light on the deeper layers of brand imagery.

Analysing the results
One of the most stunning experiences with on-line groups is that you have perfect notes at your disposal in five minutes after the discussion has ended. In face-to-face groups, you might have doubts about whether the notes are accurate in every detail, while in on-line-groups the notes are flawless. Although they contain a lot of typing and spelling errors, of course, they do give a clear picture of the discussion. In fact, there is hardly any difference in following the discussion as it develops on the screen and reading the notes afterwards. As respondents have to take more effort to make themselves
clear, the notes read very easily. The latest versions of ICQ even offer the possibility to play back the whole discussion and get a feel of the pace and rhythm of the interaction.

Although the notes read easily, it appeared quite a difficult task to analyse the results compared to face-to-face groups. This became very clear when the Dutch moderators tried to analyse the on-line group notes from Singapore. On the one hand, the notes are elaborate and accurate; on the other hand, the notes are all there is for analysis. A very important source of information is lacking in on-line groups: an understanding of what kind of persons the respondents are. Physical appearance, clothing, grooming, and dialect all convey information about the personality, attitude and lifestyle of the respondents, basic information we take into account when interpreting what people say. They also indicate to which subculture and social class someone belongs and how relevant a person’s opinion towards the subject of research can be expected.

Qualitative researchers use this information to create coherence in their analysis: these types of persons react this way for these reasons, those types of persons react differently for those reasons. Researchers and clients who view a group often discuss the outcomes afterwards in terms of who said what. Comments can be discounted or highly valued, depending on who made the comment: is he a user or non-user, is he experienced, is he able to compare different products or not, does this person make a reasonable, intelligent, self-assured impression or rather the opposite?

Researchers who analyse on-line transcripts try to get a grasp of who the respondents are by reading the short paragraph on the personal profile of the respondents at the beginning of the discussion and look at the style of answering, but they do not succeed in developing a holistic view of the respondents. They only have fragments of the respondents and keep having difficulty in understanding where individual comments stem from.

To give a typical example of this characteristic of on-line interviewing: in one of the interviews, the interviewer forgot to ask for the gender of the respondent at the beginning of the interview and the fancy nickname did not give a hunch about this. During the discussion, he tried to find out about the gender without asking it in a direct manner (“by the way, are you a man or a woman?”). Only when the interview was halfway through, this became clear (“my wife would buy a thermometer”). In future on-line research we think it is vital to be able to retrieve extensive personal profiles and photographs of the respondents, or even short video-recordings, to get a better idea of who the respondents are.

On the interaction level in the on-line interviews there are also difficulties in understanding respondents. In face-to-face groups, reactions of respondents are evaluated on a verbal level as well as on a non-verbal level. If a “yes” takes ten seconds and sounds feeble, this is evaluated different from an instant and firm “yes”. If one respondent says yes and five others are nodding ardent, this may be viewed as a confirmation that all members of the group feel the same about a topic.

One of the most difficult issues to analyse in on-line notes is the extent to which people are enthusiastic or critical towards a topic or a concept. It is extremely hard to develop a deep understanding of how people evaluate a concept. That is why it is important for on-line group members to react, even if others have given their opinion before; to get an idea of the amount of support for a viewpoint in a group. Maybe even simple tools like school-marks should be used regularly to make the respondents evaluations clear. These school-marks could be used to probe further why people think so highly or lowly of something. Answers to questions which focus on behaviours and attitudes can easily be understood and analysed.

The single interview transcripts are much easier to read than the transcripts of the group discussions. The flow is much more natural and coherent, while the group transcripts sometimes resemble a puzzle. This fragment from one of the Singapore groups shows how comments have to be carefully inspected to understand who answers what question. Playing back the original discussion certainly offers a much better basis for analysing who said what. It is possible to manually adapt the speed of the play-back session to conversation speed.

Moderator: How would you all describe your state of mind when your children are sick?
Beej: I rarely panic.
Ross: I have not had problems with Jamie, but with other children I am usually fairly calm, unlike my wife.
Moderator: How does your wife react, Ross?
Moderator: Rarely Beej, sometimes you do?
Jennie: Well, when she was really ill ... I don't know what the problem is as she is only two, you do worry a lot.
Moderator: Yes Jennie ...
Ross: I don't think it is a gender thing, I think it is an experience and personality thing.
Moderator: Why?
Ross: It would depend who spends most time with the child.

Sending files, filling in attribute lists
Two lists with attributes of thermometers had been prepared for this study and four visuals (two current thermometers, one product concept with and one without brand name). One of the advantages of using the Internet in an international context compared to, for instance, telephone interviewing, is the possibility to send files and have respondents react on them. The process of transferring files via ICQ did not work out smoothly in all cases. In those cases where the transfer failed, the files had to be sent by regular e-mail. In the focus groups, the sending and receiving of files meant an interruption of the discussion for a few minutes. Some respondents received the files much faster than others, depending on the order in which the files were sent, but also depending on line connections and the kind of hardware the respondents used. In the future this process will probably be improved considerably and will not have any disruptive effect on the group discussion. Files can be placed on the Internet site of the research agency and accessed by the respondents, using an access code.

Another problem we encountered in this respect was the fact that several respondents misunderstood the instructions and completed the attribute lists wrongly. In a face-to-face situation, this would be noticed right away, and respondents could be re-instructed to fill in the list correctly. In the on-line situation, the misunderstanding could only be discovered after the files were returned and inspected. Several respondents had to be e-mailed after the discussion to fill in and reply the correct list.

Comparing outcomes of on-line and face-to-face interviews
Qualitative on-line research can be executed faster and at relatively lower costs than face-to-face research. Hardly anyone will contest these assertions. The financial and practical advantages are obvious, therefore, but are the results valid and reliable enough to legitimise the use of on-line qualitative research? And does on-line research offer enough depth from a qualitative point of view?

To be able to answer these questions we first have to answer the question how we can determine the validity of on-line qualitative research. The validity and reliability of qualitative face-to-face research have often been questioned by academics and practitioners, so it should even be more difficult to establish the validity of on-line research. In this study, we assume that the method used in this qualitative research is a standard and accepted approach, widely used in international concept testing. Therefore, we will use a limited understanding of the definition of validity in that on-line research outcomes are accepted as valid if they reflect the face-to-face results to a large extent.

Differences in outcomes can be interpreted as differences in validity but, in principle, they could also be attributed to differences in the researchers who analysed the research material? What can one expect when two equally trained qualitative researchers write a report on the same face-to-face focus groups, using the same input? How comparable will these outcomes be? Probably most experts in the field will say that the outcomes will be the same on the whole, with differences in style and maybe some differences in emphasis on elements of the conclusions.

As we saw in the previous chapter, on-line moderation and interviewing pose a number of serious drawbacks with regard to important aspects like synchronisation of questions and answers, speed and fluency of the conversation, in-depth probing, and analysis. On the basis of the differences in process, differences in results were expected as well.

Comparing the reports, this certainly holds for the amount of information gathered, particularly the level of detail. In the on-line groups and interviews, more than one-third of the questions in the discussion guideline had to be dropped. For timing reasons, the on-line reports therefore did not contain information about interesting topics like:
• the kinds of feelings illness with children evokes;
• the perceived causes of fever;
problems experienced while taking the child’s temperature;
- reactions on a set of 15 statements with regard to the product concept.

In addition, the on-line interviews offered less room to explore interesting areas entered upon by the respondents which were not in the guideline and there was less time to rephrase questions and probe for more interesting details. The report of the face-to-face groups in Singapore presents a list of product-related elements liable for improvement which typically is the outcome of a thorough face-to-face discussion: increase the size of the display, back light in display, colour zone to identify severity of fever, high-tech look, flashing lights, reduce overall size, allow data storage.

On the level of the main conclusions and recommendations, however, the analysis shows that the overall conclusions in the face-to-face reports and the on-line reports are quite the same. In all reports, the new temple thermometer, had been evaluated positively. The product is seen as a child-friendly thermometer which shows the measuring results fast and with high accuracy. On the other hand, the costs of this new product are expected to be high and for those respondents who are satisfied with their current thermometer, they will not switch to the new thermometer. This is particularly the case for those consumers who already have a digital thermometer or an infrared ear thermometer.

Some of the respondents who use the classical mercury thermometer are very much appealed by the friendliness of the new product for children (can be administered while sleeping) and think that the temple thermometer is worthwhile considering to buy.

Interestingly, we see that the face-to-face reports of the UK and Sweden are comparable to a large extent. The respondents show the same kind of attitude towards the use of thermometers and their impression and evaluation of the new concept. The face-to-face groups in Singapore have quite a different atmosphere. Elements are brought up in these groups which are not mentioned in the European groups. These differences in atmosphere and reactions in the face-to-face groups are reflected in the on-line groups. The same elements show up in the Singapore report of the on-line group. The following elements were found in both the on-line and face-to-face groups in Singapore:
- While the temple thermometer generates interest among consumers because of its seemingly new technology, it does not appear to offer any new advantages over the in-ear thermometer.
- The new concept is rated easy to use, giving a quick measurement and (therefore) child friendly. In both conditions, it is recommended to use these characteristics as selling points in the communication strategy.
- The accuracy of the new product is questioned because the temple does not seem a logical spot for measuring temperature accurately and the exact spot to position the new product is not known (face-to-face) or the child’s perspiration might cause inaccurate readings (on-line).
- Infrared technology raises concerns about safety of use; hence, consumers need to be reassured that there are no negative side effects.
- The design should be adapted to underline child friendliness, by making it look less intimidating and clinical.

The two reports present the same kind of information with respect to the images of some globally-known manufacturers (Braun, Philips, Sony), both in level of detail as well as in content. Philips is rated more innovative than Braun, but also less modern and glamorous. Sony is seen as quite a different brand, selling different types of products, but also having a much more youthful and dynamic image: fun-loving, sociable, trendy, attention seeking and fashion conscious.

Differences in both Singapore reports are:
- The face-to-face report describes a general market feel: younger families are willing to invest in reliable, safe and easy-to-use thermometers, moving towards the more advanced and expensive digital thermometers. The on-line report does not give any conclusions with respect to an expected market development. Although in both conditions, the same price estimate for the new product is given, the face-to-face report more firmly concludes that the price will unlikely pose
a barrier for younger families to purchase the product.

- The face-to-face report describes a number of suggestions to adapt the technical aspects and functions of the product. In the on-line report, these characteristics are mentioned in describing the ideal thermometer, but not included as recommendations to adapt the new product concept.

- In the face-to-face report, a distinction is made in parents who describe themselves as highly panicky or non-confident when children fall ill, and the more experienced parents who consider themselves capable of identifying critical symptoms which call for immediate medical attention and symptoms which suggest a more natural, simple treatment. In the on-line report, this distinction is absent.

- The face-to-face report gives a detailed evaluation of the brand name “SensorTouch” (sensor = high-tech, accurate, touch = warmth, care), in the on-line report, the evaluation is concise (“catchy name”).

As described earlier, the English and Swedish face-to-face reports are comparable. The following differences with the reports from Singapore are noted:

- a more relaxed attitude towards child illnesses in general and fever in particular (especially Sweden);
- no comments are made with respect to concerns about the infrared technology;
- the accuracy of the product and the temple as the position of measurement are not questioned, the temple is completely accepted as a logical and reliable location;
- no suggestions are given to adapt the design of the product to make it more child friendly. Some remarks were made that the product looks too cosmetic, not medical and professional enough (resembling shaver);
- overall, the Swedish and British evaluations of the product concept are much more positive. Product speed, accuracy and minimal discomfort for the sick child are seen as important improvements compared to most other thermometers, making it quite an appealing new product.

This last point, the fact that the British and Swedish reports are more positive about the new concept than the Singapore reports (“not offering any real advantage”) might be contributed to the fact that the respondents in the British groups were less knowledgeable and had less experience with infrared ear thermometers. In the British on-line group, respondents who owned infrared ear thermometers also questioned the temple as a reliable spot to measure temperature. They felt that the ear is a better location to give an accurate reading than the temple because external temperatures have less influence on the reading.

The results from the on-line groups in Sweden and the UK are comparable to the face-to-face groups in these countries, apart from the above-mentioned difference that some ear thermometer users question the reliability of the temple to measure the body temperature. The on-line respondents in Sweden and the UK are much more enthusiastic about the new concept than the on-line respondents in Singapore. The speed and ease of measurement are not only welcomed because they make the thermometer more child friendly, but it also makes taking the temperature much more comfortable for parents, something which was not mentioned in the groups in Singapore (“ever tried to measure a sick child yourself, then you know speed is important”).

Although the main results of on-line and face-to-face reports are the same, on-line researchers state that they feel much less confident that they have a thorough understanding of the behaviours, attitudes and evaluations of their respondents.

To use a metaphor for the differences in on-line and face-to-face reports; the descriptions of the face-to-face reports can be compared to pictures made by a professional with a high-definition photo-camera using a lot of time and a professional studio to make his pictures. The on-line picture is also made by a professional, but he uses a low-quality mass market camera and he does not have a professional studio at his disposal. The professional picture shows an extremely clear picture with a lot of details and sharp, lively colours. The picture made by the simple camera shows less detail and the colours are rather dull. Although the contours are not very sharp, the object can easily be recognised. The cheaper camera does not
distort the shapes of the objects shown on the pictures, but the pictures are less powerful. Details have to be guessed and filled in by the viewer, whereas the professional picture leaves nothing to the imagination.

Suggestions for the use of on-line qualitative groups

Research objectives for on-line research
A number of suggestions have been given to improve the on-line interviewing process. In this paragraph we want to discuss the optimum conditions for the usage of on-line qualitative research.

First of all, a number of problems we encountered in this study can be related to the early stage of development of the Internet and the chat software used. The frequent connection failures pose a real threat to the quality of interviewing, but this will probably be improved in the near future. In earlier research conducted in The Netherlands on a national level, we noticed that the connections were much more stable compared to this international research. The Singapore on-line group also did not experience any line failures.

The slow interviewing process in on-line research, leading to less detailed results and limitations on the subjects to be covered in on-line research will, however, stay because there is a limit to how fast respondents can formulate and type their answers. This basic condition implies that on-line research can only be used for concrete, narrow research questions, not for basic studies aimed at generating a deep understanding of behaviours, attitudes and images in a product field.

The fact that on-line moderators lack the non-verbal information to interpret reactions from respondents is also a barrier. As has been described before, this barrier can partly be overcome by creating a better understanding of the personality and lifestyle of the respondent and by offering enough time to dig deeper and rephrase questions to be sure what respondents mean.

On-line singles rather than on-line groups
The results of this study suggest that on-line single interviews should be preferred to on-line groups. First of all, the anonymity of the respondents creates a setting in which they feel relaxed and comfortable. On-line respondents are much more candid and are more responsive to creative techniques compared to face-to-face single interviews. The only reason to conduct groups instead of singles is the fact that respondents interact and that this interaction process leads to new interesting topics and a better feeling of how consumers talk about products. The results make clear, however, that the on-line groups we conducted showed hardly any interaction between respondents. Although this level of interaction could be improved by limiting discussion topics (or even divide a discussion in several sessions), we think that on-line interactions will probably remain inferior to face-to-face interactions. The absence of visual eye contact hinders transparency in understanding who reacts on who for what reason.

Another advantage of single interviews is that the synchronisation of questions and answers can be controlled and that the coherence and fluency in the conversation is better than in on-line groups.

On-line qualitative research as a quick multi-country check
Although on-line qualitative research poses serious limitations with respect to the scope of research questions to be covered and the depth and amount of detail generated, the enormous gain in high speed and low costs seem to balance these limitations. International on-line research is, in our view, particularly interesting for multi-national companies which sell their products on a global scale and are afraid to build their marketing policy on research which has been conducted in only a few of these countries. On-line research could serve as an additional multi-country check on qualitative research which has been conducted in only one or a few countries. In this context, the on-line research is not intended to give insight into the psychology of consumers, but to check whether what other countries or cultures may add to the general picture which has been made on the basis of qualitative face-to-face research. This study seems to suggest that clients and researchers may feel confident that the on-line studies do not yield different results from face-to-face studies, but only less detailed results.
Creating on-line panels
The best conditions to generate good on-line results is to create a panel of a few hundred ICQ users in each relevant country. These respondents have been checked for their personal identifications and typing skills. They have been trained to adhere to a number of basic rules when participating in on-line research and their participation is checked by telephone the day before the actual fieldwork. In this way, respondents can be interviewed who are known to the interviewer and willing, and able to participate. These conditions will probably raise the quality of interviews substantially, compared to ad-hoc recruitment on the ICQ lists.

Discussion
The outcomes of the study described in this paper point to an intriguing conclusion: Qualitative researchers who participated in this study say that the lack of non-verbal communication impedes their understanding of the respondent’s ideas, making the analysis and interpretation a difficult task. The absence of non-verbal signs does not so much hamper understanding what is said, but broader, what it means in the context of the lifestyle and personality of the respondents. This first basic research in this field seems to suggest, however, that the differences in conclusions appear to be small. Suppose that future research would confirm that under the right conditions the outcomes of both types of research are comparable, this then tells us something about the importance of non-verbal signs in the process of qualitative research. A large part of the validity of analysis and interpretations in qualitative research seems to stem from other than visual sources. Probably most of the qualitative insight is gained by basic rules which have little to do with being able to see the respondent; basic rules like:

- placing respondents in a surrounding in which they feel free to express their thoughts and feelings;
- putting questions in an open and neutral format;
- giving respondents time to express their thoughts and feelings; and
- probe further for a full understanding.

These basic conditions, combined with the analytic skills which experienced qualitative researchers have developed, appear to enable them to translate on-line reactions quite well and draw valid conclusions to a considerable extent. Looking at the future, it could even be speculated that researchers might develop new skills in interviewing and analysing which compensate for the lack of visual stimuli, much like blind people develop exceptional senses of hearing. Additional basic research on blinds or studies into the mutual understanding of people who have an ongoing chat relationship might shed more light on the communication processes that compensate visual information. Nevertheless, we would strongly advise research agencies not to rely purely on on-line research in studies which are basic (broad, exploratory, strategic) in character, or in lifestyle and communication studies in product areas where minor details are important to develop the right marketing policy. These kinds of studies still make up the main territory of qualitative research. Used as an additional source of cheap and fast information in international market research covering several countries and cultures, the usefulness and relevance of qualitative on-line research seems to be clear.

Note
1 For usage of the ICQ program we refer to the usage notices on the ICQ.com Web site.