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**Children and the Internet: Parental concerns
and Internet Site data**

Submitted by Drs. Sharon Strover, Ellen Wartella, Pat Stout and Jef Richards
Texas Telecommunications Policy Institute and the College of Communication
University of Texas at Austin
Austin, TX 78712
email: [sstrover@mail.utexas.edu](mailto:ssstrover@mail.utexas.edu)

Overview of Comments

The Texas Telecommunications Policy Institute is a newly created policy institute at the University of Texas that addresses contemporary telecommunications issues. We undertake various research projects in order to provide data relevant to the policy process, with a special focus on educational, health-related, and library-related information issues. The Institute has faculty affiliates from around the University in fields as diverse as economics, advertising, engineering, communications, public affairs, and library and information sciences; it also has a public agency affiliate group representing various public agencies active in setting information policies and in implementing data-gathering and data dissemination programs. We are pleased to participate in the FTC's privacy workshop since one of our current projects provides information that has some bearing on its core questions.

The comments reported here are based on preliminary data from a project that is mid-way in its progress. We offer it in the spirit of sharing some tentative observations so that this forum might be spurred to ask the best questions and incorporate perspectives that have not yet received very much research attention. The Federal Trade Commission workshop session addressing children will be faced with a genuine dearth of relevant data. While our work is incomplete, we believe its early shape suggests some useful points.

We plan to address two question areas of the third component of the workshop:

- What are the information-gathering practices used by commercial Internet sites targeting children?

Session Three: What kinds of personal information are collected by children's commercial Web sites from children who visit those sites?

- What are the concerns and knowledge of parents about their children's Internet use?

Session Three: What research exists about parents' perceptions, knowledge and expectations regarding children's personal information being collected by site operators? What are parents' perceptions, knowledge and expectations of the risks and benefits of using "privacy" technology?

Session Three: Do children's information practices in the online context differ from those implemented in other contexts?

Session Three: Do schools, libraries and other settings in which children may have access to the Web have a role to play in protecting children's privacy?

Nature of the Research

Our research has four different modules, only two of which we will use in these comments. First, we are content analyzing several Internet sites targeting children. We used a snowball sample to generate the URLs in our database; consequently, it contains sites that are sponsored by educational (.edu), commercial (.com), institutions as well as non-profit organizations (.org). For the analyses reported here, we singled out 50 commercial databases. At this stage our database focuses on commercial sites that are not under the CompuServe, AOL or Microsoft domains. While these services are very important and have taken some first steps toward actively developing high quality children's sites and offering some privacy protections, our analysis of them will occur in the next few months.

We recognize that any attempt to analyze Internet sites must acknowledge that sites change often and that many leave or enter the Internet domain. Site content is essentially a moving target. Nevertheless, we offer

the findings reported below as a snapshot of typical sites during the early months of 1997. Appendix I contains our codesheet for the content analysis.

The second component of the data reported is focus group material. We have conducted focus groups with 15 parents of a combined total of 21 children who use the Internet. Our discussions with them covered what their children use the Internet for, what their parental concerns are, how they deal with privacy matters, how they interact with their children about their Internet concerns, and so forth. Appendix II contains the questions used in the focus group protocol.

This research has been underway since February, 1997. We anticipate conducting additional focus groups with parents, completing our Internet site content analysis, and conducting interviews with Internet Service Providers (at this writing, they have some liability for minors' exposure to indecent material under the Communication Decency Act) and Internet content providers creating sites for children. The research team is composed of people who are specialists in children and media, advertising, and telecommunications and Internet research. The principal investigators include faculty from the Departments of Advertising, Radio-TV-Film as well as the Dean of the College of Communication at the University of Texas. The Hogg Foundation for Mental Health in Austin, Texas funded this research.

Internet sites targeting children: a content analysis

Session Three: What kinds of personal information are collected by children's commercial Web sites from children who visit those sites?

Response: We have analyzed 84 Internet sites offering content directed at children, 51 of them commercial Internet sites. As pointed out above, these were sampled in an unsystematic fashion, but do represent some logical paths that children might follow in pursuing different Internet links. Some Internet sites explicitly identify the age of their target audience, but most do not. Additionally, several have various pages that are appropriate for different aged children – separate areas for young children as opposed to teenagers for example (the <http://www.family.com/> is an example of a set of pages to multiple ages, including adults). However, we inferred from the types of material offered the following target age ranges are represented in our sample: 24 of the sites target 5-12 year olds; another seven target teenagers, 13-17 year olds; 13 encompassed a broad age range of children from K-12; and seven sites included pages that offered material for variously aged children, as well as for parents or teachers.

Of the commercial sites, we found 39% used advertising (not counting purely self-promotional efforts to other pages within the same site) and nearly 61% (31) offered some sort of interactive service or component.¹ The ads were typically for computer-related items, including software, CD ROMS, and actual computers or name brands such as IBM. Others advertised product tie-ins (the books on which a cyber-character was based, for example). Self-promotional advertising was common, although at this stage of our coding we did not count these sorts of ads. However, it is probably worth noting that on a couple of sites that would probably attract young children, notices of ads were displayed. For example, <http://www.kidscom.com/> uses an “ad bug” that is accompanied with the text “Hi! I’m the ad bug. I’ll show up everywhere on kidscom where there’s advertising. So if you see me, you’ll know you’re seeing an ad.” Another site, <http://www.candystand.com/> has a character that appears to flag ads, but there is no explanation of this character’s function; non-reading children and even younger reading children may not be able to interpret its meaning.

Only about 20% (10 sites) had chat rooms, although we believe more sites are adding these features. These seemed to be pitched most often to teenagers. Younger children’s sites more often used a Bulletin Board system. These were usually monitored or screened, with notices that explicitly indicated that was the case.

The subset of sites that had chat rooms or offered email or e-pal services were the sites most likely to require or request information from users, and the most frequently required or requested information elements were name (19 sites) and email address (18 sites). Sites that sold products such as games or T-shirts, or product tie-ins such as books would request additional information contingent on the user ordering something, requesting a catalog or a subscription to regular updates to the site, or otherwise moving closer to a product purchase. Among the next most requested items of information were: geographic location (7), age (6), phone (5), consumer information and grade level (4), information about parents (3), school information, date of birth, sex (2), and address (1).

One-fifth of the sites (only 11) posted policy or use guidelines mentioning privacy or information disclosure. The same number of sites had areas for parents, sometimes with links to safety information. For example, <http://www.array.4kids.com/> has a long list of sites with information for parents about children and the Internet, as well as sites that are parenting resources. (Others examples include <http://iquest.com/~jrm/moms/kid.html>, <http://www.ks-connection.com/>, or <http://www.nabiscokids.com/parents.htm>.) Nine sites (nearly 20%) offered explicit safety tips, although some of those seemed to be more directed at parents reading levels than at kids’ reading levels. A few sites went out of their way to frame their tips in the language that children at different ages would use.

¹ We defined that latter in terms of doing more than offering simple hyperlinks to other pages. Interactive services could include opportunities to download games, to solve puzzles, to find e-pals and the like.

Of the commercial sites, about half (26) requested no information at all from users. About 39% of the sites (20) required registration for some activities - chat rooms, registration for product contests, matching people up for e-pals, and so forth as noted above. Only a handful (4) requested rather than required similar information, usually for something like an optional "Guestbook" in which people were encouraged to offer comments about the site.

Finally we found that 12 of the 51 sites used cookies in tracking navigation, some sites at every page link and others less frequently.

In conclusion, information gathered by commercial Internet sites usually takes place during signing children up for services such as e-pals, chat rooms, or other product notification services. Names and email addresses are the most frequently gathered information. Some of these interactive gestures seem designed to convey a sense of community and to draw users into the sites' special activities.

Parental concerns

Session Three: What research exists about parents' perceptions, knowledge and expectations regarding children's personal information being collected by site operators? What are parents' perceptions, knowledge and expectations of the risks and benefits of using "privacy" technology?

Response: A response to the issue of what parents believe and expect about information being collected from their children is to some extent contingent on what they believe their children are doing on Internet sites. Our focus groups suggest that parents are able to and often do monitor their children's home use of computers and Internet sites, and that there are age-related differences in what children do on the Internet. Our sample included parents with children as young as 5 and as old as 19.

Young children who are not able to read or spell or type well (roughly under 10 years old) need assistance from adults in order to use Internet or other network sites. Therefore, when at home or at libraries these children have parents nearby or sitting with them as they search for different resources. As one man of a seven-year-old pointed out, "since most of this stuff is done at the library, and he [7-year old son] doesn't go to the library by himself, then I'm pretty much there all the time...to watch what he's doing. And he's still at the stage where he wants a lot of pictures and not a whole lot of text." Younger children tend to prefer game sites and sites that feature favorite book or movie characters (often one and the same), and are oriented to pictorial sites rather than those with a great deal of text. Examples of sites mentioned included Sega game tip locations, Disney, and favorite book and movie/TV characters such as the Power Rangers and James and the Giant Peach.

Older children, particularly teenagers, are more interested in interactive sites, especially chat rooms, as well as sites that might offer information on highly specific personal interests (Japanese animation, rock groups, music, school projects, etc.). Some parents mentioned that their children - boys especially - download games or game demos from the Internet. One mother's style of interacting with her two young teenage boys' Internet use was typical: "...we do sorta watch over their shoulders to see what they're looking at and where they're with it and what they're after...I check periodically to see what's on the screen..."

Insofar as most children have access to email and the Internet through their parents' accounts, and insofar as using the Internet may occupy an only phone line, it is easy for parents to see the sort of interactions and activities that children undertake on the computer. Very few - perhaps three - of the children represented in our groups had their own direct email addresses. That said, the parents in our focus groups believed they had clear ideas about what their children were doing on the Internet. They could check files and read their children's email, and they frequently did both. Home computers were generally shared, and consequently the parents' own use would lead them to information about their children's activities. Some of their motivation in doing so had to do with routine computer maintenance (for example, children's downloads sometimes overloaded the hard drive), but they generally felt they had the right to monitor their children's Internet behavior as well.

When asked whether they had any anxieties about their children's Internet use, most parents responded with stories focused not on commercial information collecting worries but rather with stories focused on either their concerns about their children's exposure to indecent content or worries about their children meeting someone over the Internet. (The mother of an eight-year-old girl said "I think the stories that scare me are the ones where kids are seduced over the Internet by strangers in whatever manner. And that can happen in a public setting, so I guess it's not necessarily an Internet issue, although it can happen more covertly over the Internet and it seems more insidious because it might seem pretty innocent initially.") In that sense then, the "privacy" technology that interested them was net "nanny" software that could keep their children from certain sites. Even so, there was some sentiment that this software could be defeated easily by their children: The mother of two older teenagers (15 year old girl and 19 year old boy) commented "...a 17-year old friend of [my child's] figured out what his dad's password was and just totally disabled that nanny. It took him about two hours."

However, the members of these focus groups also felt that the best solution to Internet threats was to extend the lessons they give their children about everyday encounters in the physical world to encounters in the cyber world. That is, they felt that the same or similar precautions their children would exercise in releasing information about themselves to any stranger or service should apply whether the environment is the shopping mall, the telephone, or the Internet. One parent of a 14-year old stated: "...as long as she sticks to the one standing rule that I have, which is don't give out your address to people you don't know, she [her child] can do anything that she wants to do [on the Internet], basically, and she seems to be just fine for that;" another mother of a 12-year old commented: "I feel like everything I've taught her about street smarts just in her own neighborhood she...we've tried to apply it to the Internet, and I'm not really nervous about anything right now. I'm sure something will come up, but I think she'll talk to us about it."

When asked explicitly about Internet sites that requested children register, most parents conceded they did not think their children would ask them about it, although some had rules prohibiting their children from giving out their home address and phone number. A father said of his 14-year old son, "I haven't restricted my son on anything except giving out his address and phone number. Once they get his email address, that's fine." [Our site content analysis indicated few sites ask for this more personal information anyway.] Five commented that it was clear when their children had signed up with a commercial site because they would receive "junk" email advertising a product (movie releases, etc.), and several discouraged registration because they did not want email from commercial companies arriving at their addresses. One commented "...I've done some marketing work and you don't know where that information ends up, you just have no idea."

Most of the parents were only vaguely aware of "cookies," and how they functioned. One participant in a group was able to explain cookies with great detail, and the other members seemed keenly interested in this. This suggests to us that parents are only somewhat familiar with what information may be gathered from Internet search behaviors, and while they do not want unsolicited email arriving in their boxes, they see it as only mildly irritating and not a privacy threat per se. However, their unfamiliarity with the nature of the data being gathered during online interactions - theirs as well as their children's - hints at the need for better information to be both available and obvious to parents. They may well feel greater concern if they were aware of what was being collected by the sites.

Session Three: Do children's information practices in the online context differ from those implemented in other contexts?

Response: Based on reports from our focus groups, children's information practices in the online context are very different from those in more focused settings such as schools or libraries. The online setting allows children to play, to seek entertaining material and interactive experiences. The opportunities for what is role-playing in one context or deception in another are clear - and it appears that older teenagers active in chat situations regularly experience both. Fundamentally, however, our parents noted that the online environment may function quite differently for the child in the home environment than it does in the school environment. In the latter, it is expected that children work on school-related projects. In the home environment however, more play and exploration are expected and indeed encouraged.

Because information-seeking in the school context is generally goal-driven and the available resources pre-selected and approved, the parents believed there is less likelihood that children will be exposed to objectionable content or to invasive personal data-gathering practices. The online environment, however, is open to either deliberate or inadvertent information seeking practices that can deliver objectionable content; some of those practices also may entail gathering individual data via registrations.

Most parents commented on the several positive aspects of their children using online information: the computer and Internet mode encouraged their typing and spelling skills; certain transactions help children to construct full and better sentences, and to learn how to undertake research; and there is a wealth of resources useful to school homework and projects and to individual hobbies and passions.

However, many parents also commented about negative aspects of the online environment: chat rooms are misleading, too sexually oriented, and contain objectionable language; unsolicited email associated with children's use of commercial sites usually was considered a disadvantage, particularly if the child shared the parent's account (the typical practice). Some parents noted there is insufficient information on the Internet for younger children who lack good reading skills; additionally, they are afraid their children might believe automatically some of the things they read on sites or in chat rooms - that there are limited means to "test" the truth of certain sorts of information or exchanges. One mother of 15-year old girl recounted how her daughter and a girlfriend met two boys in a chat room two years ago (when the girls were 13) and arranged a meeting with them at a local shopping mall. Although in this case the encounter worked out, she's aware of the chat room dangers - and allures. The same mother commented on chat rooms, "...you go on and say you're a girl of a certain age, and you just get swamped by all these people who want to have private conversations with you, and it gets really gross really fast." Another mother stated "I think the chat rooms are the most dangerous places at this point, for being entrapped." Younger children are particularly vulnerable to deception.

For example, one father of a ten-year old boy said "I was talking to Will [his son] and he said he was talking [online] to someone and he said, 'well, I didn't know he was a boy when I first met him,' and I said, 'well, you learn these things.' And I would think that over the Internet where you can be anybody or be anything that there is a danger there, if you've got a good line of talk, you can lead people a long way and they really don't know what you are because it's sort of like, the good side and the bad side..." Another father of a ten-year old said "...my concern too is that fictional world aspect because kids already have a hard enough time differentiating between what's real or not, in television and film and now even on the Internet. Even my oldest, who's ten, still, if he sees it, it's real, and if he sees it in print, it's real, and if he sees pictures it's real, and still has a hard time differentiating or evaluating things because he doesn't have anything to evaluate against yet..."

It seems apparent that these parents value their children's facility with computers and Internet resources, and that they try to discuss certain privacy and protection issues with their children. At least four parents mentioned that they had set up guidelines about not giving out names and addresses, and others implied the same. However, there is a current of worry around the subject of their children's Internet use. The need for clear guidelines, warnings and instructions on sites would help to ease some of their concerns. The parent of a 14-year old boy and an eight year old girl commented "I think what would help a lot is having - I don't

know, maybe these are out there and I've been oblivious to it or it just kind of caught me off guard - but just having guidelines like, you know, a booklet or pamphlet, to sit down and talk to your kids about these things, because I'm fairly computer literate and I work with computers all day and I know a lot about kids' software but you just don't think. You think you're giving your kids this great advantage, this computer and Internet, cause they can do homework, they can do research, and then all of a sudden the dark side creeps up on you."

The most pertinent policy question seems to be: what might we need to protect children from, and at what ages do children need such protection? Given the high deception potential of places such as chat rooms as well as the silent data-gathering that occurs as one explores the Web (see below), there may be some grounds for considering protections that are built into systems rather than volitional: if we cannot depend on children to exercise good judgment, then the sites they logically spend most of their time with should offer protections unconditionally.

Session Three: Do schools, libraries and other settings in which children may have access to the Web have a role to play in protecting children's privacy?

Response: The prevailing sentiment in our focus groups was that schools and libraries primarily are interested in limiting their liability for any potential damage to children that could occur as a result of their Internet access capabilities. Using filtering software such as Net Nanny or CyberPatrol is one common institutional response, particularly among libraries. The Austin city library installed CyberPatrol earlier this year and put its filtering mechanism on the highest level; one parent commented that he was using a library computer to search for a friend's email address and the name was blocked with this filtering software because his friend's first name was "Luther." Another commented that "there's a whole list of places you can go to basically get around blocking, so that stuff's out there." This dissatisfaction with the filtering software was linked to a general sense that filtering was not going to be a realistic answer to limiting children's access to certain material if those children were sufficiently motivated to get to it.

Using the Internet in schools is increasingly common, although schools and states differ widely in how much access they offer children. It appears to be common in public schools to develop Internet projects that cultivate "e-pals," the electronic version of penpals. This enables children to practice writing while also allowing them to learn about other cultures. However, for one of our group members some uninvited and untoward correspondence occurred in these assignments: an older teenager (15 years old) from Norway sent some language to a local elementary school that was objectionable. The consequence of this was that the school entirely abandoned its use of the Internet for a while. Some group members assumed that schools would probably have somebody monitoring their children's Web use, and that either a teacher or the public nature of the computer monitors in that setting would take care of privacy concerns.

The overwhelming perception is that filtering software is ineffective and doesn't deal with the larger problems of (1) linking children with appropriate content, (2) teaching children to behave civilly, and (3) providing them with the skills to evaluate truth and falsity as well as to assess danger and opportunity. While schools may have a role in insuring children's access only to "approved" sites, commercial or noncommercial, parents did not see school policies as any final answer to the issue of children's privacy or protection.

Conclusion

The parents' comments here represent a snapshot of experiences, knowledge and attitudes as everything around them changes: as their children age, as the Internet environment becomes broader, more commercialized, and possessed of more engaging audio and video site components, and as technological capabilities change. Many of the parents mentioned the limitations of their home systems – their slow modems, their poor printers, their machines' limited speed and processing capacity, and their sharing an email address with their children. All these change factors suggest that whatever we believe we know about privacy practices, content fears, and children's behaviors is certain to look rather different in five years – perhaps even three years. Even as black and white, single television set households became multi-set, color television households, even as family TV viewing has become highly individualized viewing as children and parents have separate viewing spaces, so too we can expect the computer use environment to change quickly. Already schools across the country are embarking upon large-scale computer wiring plans so that many more school computers will offer Internet access to children. The day when children have their own personal Internet access from home will probably come as well, impairing parents' abilities to monitor their children's everyday interactions in cyberspace.

Comments from parents in our sample underscore that the Internet can be a raunchy, insulting place with many dangers. However, it can also be a useful, fun, and productive place. Given parents' perception that the Internet resembles other "spaces" children go alone, and that the rules for maneuvering in that space likewise resemble rules applicable to other environment, policy makers might focus on inculcating a better understanding of the "best" rules for moving among sites. Sites attracting younger children would be excellent candidates for such "rules" because children can take those early lessons with them as they grow up to use other sites, and because their parents have a better chance of encountering them as well and discussing them with their children.

The parents did not seem concerned at this stage about the information being gathered about their children – or themselves. However, most were unfamiliar with exactly what was being gathered. Their annoyance with "junk" email may escalate as more sites develop methods to "push" content, ads, offers, and so forth to children at their parents' email addresses.

Appendix I: Content Database Codebook

<input type="button" value="...COM Search"/> <input type="button" value="...EDU Search"/> <input type="button" value="...ORG Search"/> <input type="button" value="...NET Search"/>	
URL	<input type="text" value="URL"/>
Content Type	<input type="checkbox"/> Educational <input type="checkbox"/> Social <input type="checkbox"/> News/Information <input type="checkbox"/> Fun/Entertainment
Title	<input type="text" value="Title"/>
Brief Description	<input type="text" value="Brief Description"/> <input type="text"/> <input type="text"/>
ISP	<input type="text" value="ISP"/>
Type of Service	<input type="checkbox"/> Webpage <input type="checkbox"/> Mailing-List <input type="checkbox"/> On-Line Service <input type="checkbox"/> Newsgroup <input type="checkbox"/> Email Oriented <input type="checkbox"/> BBS
Target Age Group	<input type="text" value="Target Age Group"/>
Advertising	<input type="radio"/> Yes <input type="radio"/> No
Interactive	<input type="radio"/> Yes <input type="radio"/> No
Links to Other Kids/People	<input type="radio"/> Yes <input type="radio"/> No
Links to Other Sites?	<input type="radio"/> Yes <input type="radio"/> No
Chat Rooms	<input type="radio"/> Yes <input type="radio"/> No
Policy/Usage Guidelines	<input type="radio"/> Yes <input type="radio"/> No
Section For Parents	<input type="radio"/> Yes <input type="radio"/> No
Safety Tips	<input type="radio"/> Yes <input type="radio"/> No
Cookies	<input type="radio"/> Yes <input type="radio"/> No
Contact	<input type="text" value="Contact Person"/> <input type="text"/> <input type="text"/>
	<input type="radio"/> Counter <input type="radio"/> Number of Hits <input type="radio"/> Yes <input type="radio"/> No <input type="text" value="Counter Value"/>
Registration Required	<input type="radio"/> All Activities <input type="radio"/> Not Required, but Requested <input type="radio"/> Some Activities <input type="radio"/> Not Requested
Information Requested	<input type="checkbox"/> Name <input type="checkbox"/> Grade Level <input type="checkbox"/> Phone <input type="checkbox"/> Consumer Info <input type="checkbox"/> Age <input type="checkbox"/> Gender <input type="checkbox"/> Email <input type="checkbox"/> Info About Parents <input type="checkbox"/> D.O.B. <input type="checkbox"/> Address <input type="checkbox"/> School Info <input type="checkbox"/> Geographic Info
Internic Related Information	
Administrative Contact	<input type="text" value="AdminCon Firsrname"/> <input type="text" value="AdminCon Lastname"/>
Address	<input type="text" value="Address"/>
	<input type="text" value="City"/> <input type="text" value="State"/> <input type="text" value="Zip"/>
Phone	<input type="text" value="Area Code"/> <input type="text" value="Phone"/>
Domain Name	<input type="text" value="Domain Name"/>
Comments	<input type="text" value="Comments"/> <input type="text"/> <input type="text"/>
Entry Created	<input type="text" value="Entry Created"/>
Entered By	<input type="text" value="Entered By"/>

Appendix II: Focus Group Protocol

Children and Internet Focus Group Questions

1. What sort of access to the Internet do your children have at home? How closely are you involved with your children's use of the Internet?
2. What do your kids do on the Internet?
3. Have you had any firsthand experience with material you think is inappropriate for children, or problematic? Explain.

Have you encountered any situations that caused you concern with your child's use of the Internet? What were they? Reactions?

4. What sorts of conversations, if any, have you had with your children about what to do on the Internet? Do you have any rules or restrictions? Any other computer use rules in your household?
5. What concerns you most regarding children and net use? privacy? inappropriate content? commercialism? physical threats/harm? something else?
6. Do you use or have you considered using any filtering software or other technological means of restricting access? What are your thoughts about this? (CyberPatrol, Net Nanny, etc.)
7. Do your children have Internet access outside of your home? What sorts of concerns do you have about such access? How do you feel about the public library's use of CyberPatrol on its computers?
8. Have you sought Internet material or sites specifically geared to children? What are your thoughts about them?
9. Are you aware of Internet sites with advertising on them? Reactions?

Appendix III: Internet Sites Analyzed