

Virtual Worlds and Kids: Mapping the Risks

A REPORT TO CONGRESS



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EXECUTIVE SUMMARY

Expressing concern about reports that children can easily access explicit content in online virtual worlds, in March 2009 Congress directed the Federal Trade Commission to conduct a study of such worlds, examining the types of content available and the methods virtual world operators use to restrict minors' access to explicit content. Accordingly, the Commission conducted an empirical survey of the explicit content offerings in 27 online virtual worlds, selected as a cross section of worlds specifically intended for young children, worlds that appealed to teens, and worlds intended only for adult participation. The Commission also obtained information directly from six specific virtual worlds. This Report presents the results of the Commission's inquiry, focusing only on content found in online virtual worlds, and not on explicit content that children might encounter generally on the Internet.

Commission researchers registered in each world as adults, teens, and children, creating video recordings of each world's content offerings. Commission researchers then looked at each video recording, documenting instances of sexually or violently explicit content observed. Because Congress did not define "explicit content," the Commission developed a set of factors to guide its review. The Commission recognizes that defining what constitutes explicit content is inherently subjective, as is characterizing a virtual world's level of such content as heavy, moderate, or low. These subjective determinations were necessary, however, for the Commission to conduct the study as directed.

Overall, the Commission found at least one instance of either sexually or violently explicit content in 19 of the 27 virtual worlds surveyed. The Commission observed a heavy amount of explicit content in five worlds, a moderate amount of explicit content in another four worlds, and only a low amount in the remaining 10 worlds in which explicit content was found.

The Commission studied both child-oriented and teen- and adult-oriented worlds. Of the 14 child-oriented virtual worlds in the Commission's study (those that were open to children under age 13), seven contained no explicit content, six contained a low amount of explicit content, and only one contained a moderate amount of explicit content. Significantly, almost all of the explicit content observed in the child-oriented worlds occurred when the Commission's researchers were registered as teens or adults, not when registered as children. In addition, most of the explicit content observed was text-based and found in chat rooms, message boards, and discussion forums.

The Commission observed a greater concentration of explicit content in worlds that permit teens to register and where teens are likely to congregate. Twelve of the thirteen online virtual

worlds directed to teens or adults contained explicit content, with a heavy amount of explicit content observed in five such worlds, a moderate amount in three worlds, and a low amount of explicit content in four worlds. Half of the explicit content observed in the teen- and adult-oriented virtual worlds was text-based; the balance of the explicit content observed appeared in graphic form, occasionally with accompanying audio.

For the eight teen- and adult-oriented online virtual worlds that contained moderate to heavy explicit content, the Commission analyzed the methods the worlds used to prevent minors from accessing such content. Most worlds employed age-screening mechanisms to prevent minors from registering with a birth date below the minimum participation age. Half of these worlds took the additional step of rejecting a child's immediate attempt to re-register as an age-eligible user from the same computer. Three of the teen- and adult-oriented virtual worlds in which the Commission found a moderate to heavy amount of explicit content had separate "adult only" sections to keep minors from viewing age-inappropriate content; these worlds also employed supplemental age-segregation initiatives to prevent interactions between adults and minors.

The Commission also reviewed the conduct standards for the teen- and adult-oriented worlds in which it observed moderate to heavy explicit content, and found that, while most prohibited certain types of sexual, threatening, or abusive material, they did so in vague terms that provide little guidance to users about specific prohibited conduct. Indeed, the Commission found explicit content in these worlds despite their rules of conduct, a fact that indicates that conduct standards, on their own, are insufficient to stem the creation of or exposure to explicit material.

Currently, operators of these teen- and adult-oriented virtual worlds rely on community policing measures such as abuse reporting systems, flagging, and live moderators to enforce their conduct policies. Some worlds also employ live moderators to monitor heavily populated areas and help control conduct in those areas. Finally, in an attempt to bolster their conduct standards, several of these worlds use language filters to prevent objectionable language from entering into text-based communications in-world, with limited success. Of the three teen- and adult-oriented virtual worlds purporting to have filters, the Commission found a heavy amount of explicit text in one of these worlds, a moderate amount of explicit text in one world, and a low amount in the remaining world.

As a result of its study, the Commission suggests that virtual world operators make certain enhancements aimed at reducing the risk of youth exposure to explicit content, including:

- Ensuring that the age-screening mechanisms virtual world operators employ do not encourage underage registration;
- Implementing or strengthening age-segregation techniques to help ensure that minors and adults interact only with their peers and view only age-appropriate material;
- Re-examining the strength of language filters to ensure that such filters detect and eliminate communications that violate online virtual worlds' conduct standards;
- Providing greater guidance to community enforcers in online virtual worlds so that they are better equipped to: self-police virtual worlds by reviewing and rating online content; report the presence of potential underage users; and comment on users who otherwise appear to be violating a world's terms of behavior; and,
- Employing a staff of specially trained moderators whose presence is well known in-world and who are equipped to take swift action against conduct violations.

Given important First Amendment considerations, the Commission supports virtual world operators' self-regulatory efforts to implement these recommendations.

In addition, the Commission recommends that parents and children alike become better educated about the benefits and risks of youth participation in online virtual worlds. The Commission is committed to ensuring that parents have the information they need to decide which online virtual worlds may be appropriate for their children.

INTRODUCTION

At Congress's request,¹ the Federal Trade Commission ("the Commission") conducted a study of virtual reality web programs, commonly known as online virtual worlds. The Commission's study examined the types of content available in virtual worlds, focusing on users' access to explicit content and the methods virtual world operators use to restrict minors' access to such content. This Report presents the results of that study.

ONLINE VIRTUAL WORLDS: APPEAL, PROLIFERATION, AND RISKS

Online virtual worlds blend three-dimensional or 3D gaming environments with elements of online social networking, allowing their users to interact in and shape their own online content.² Through avatars,³ virtual world users socialize, network, play, and often conduct business in graphics-intensive landscapes using text or voice chat, sounds and gestures, and video.⁴

Because new virtual worlds are constantly being created, their exact number is hard to determine. Obtaining accurate demographic and virtual world usage statistics similarly can be difficult since commercial virtual worlds do not routinely publicize information on user traffic.⁵ Some reports state that there may be as many as 200 youth-oriented live, planned, or beta virtual worlds,⁶ with these numbers expected to grow in the coming years.⁷ Users, especially tweens and teens, are embracing online virtual worlds in significant numbers.⁸ Popularity among children, especially among pre-teen users, is projected to increase.⁹

For children and teens, virtual worlds offer educational, social, and creative opportunities.¹⁰ For example, educators are using these spaces to provide students with hands-on experiential learning opportunities.¹¹ Online virtual worlds also can serve as conduits for increased civic engagement.¹² Even features on virtual worlds that are not specifically designed to educate have been cited for their educational and social value.¹³ Nevertheless, explicit content exists, free of charge, in online virtual worlds that minors are able to access.¹⁴

The Commission's study found some form of explicit content on 70% of the worlds it reviewed.¹⁵ As a result, this Report suggests that virtual world operators make certain enhancements aimed at reducing the risk of youth exposure to such content.

SCOPE OF THE COMMISSION'S REVIEW

Although there has been considerable scholarship concerning virtual worlds, there is no universally agreed-upon definition of an online virtual world.¹⁶ The Commission targeted its inquiry to virtual worlds that do not charge for entry and that provide for real-time communications among users, represented in avatar form, who physically appear together within the same landscape.¹⁷ The Commission did not include within the scope of its study massively multiplayer online games (“MMOGs”). Unlike most virtual worlds, MMOGs give users only limited control over the game world or their roles in it.¹⁸

The Commission believes that, in requesting that the Commission report on the availability of “explicit content,” Congress intended the agency to examine and report on content extending beyond the legal definition of “obscenity.”¹⁹ The Commission interpreted Congress’s use of the term “explicit” to cover both sexually and violently explicit content. Since no settled definition of explicit content exists, and the Congressional request did not provide a definition, the Commission had to develop its own factors for explicit content. Drawing in part from the rating criteria of the Motion Picture Association of America and the Entertainment Software Rating Board, the Commission crafted the following guidelines for its review:

Sexually Explicit Content

Depictions or descriptions of: (1) sexual references; (2) full or partial nudity, including depictions of uncovered female breasts, aroused or unaroused male or female genitalia, and unrealistic or overly detailed genitalia; (3) bestiality; (4) sexual acts to or with minors (anyone under the age of 18); (5) sexual acts including, but not limited to, penetration/intercourse, and/or oral sex with or without another avatar or any other object, including overt sexual toys and/or sexual aids; or (6) sexual behavior that has a violent context.

Violently Explicit Content

Depictions or descriptions of: (1) animations involving blood; (2) excess/gratuitous blood or the mutilation of body parts; (3) violence against minors (anyone under the age of 18); (4) violence toward animals; (5) aggressive conflict, including but not limited to realistic weapons used against other avatars or whose intent was obvious, aggressive harm of other avatars; any realistic weapons with blood or gore depicted on them or in their use; graphic and/or realistic-looking depictions of physical conflict, graphic violence, dismemberment, self-mutilation, homicide; anything depicting extremely grotesque images or acts; or (6) graphic discussions or portrayals of suicide.

Content typically seen in “PG-13” movies or “T”-rated video games was not considered explicit content.²⁰ The Commission recognizes that, in applying these factors, judgments as to what constitutes explicit content are necessarily subjective.

SOURCES OF INFORMATION

The Commission conducted an empirical survey of the content offerings on 27 online virtual worlds that permit users to interact free of charge.²¹ In crafting its survey sample, the Commission included a cross section of online virtual worlds that were specifically intended for young children, worlds that appealed to teens, and worlds intended only for adult participation.²² Demographic data on website viewership showed that even very young children visited each of the online virtual worlds in the Commission’s study.²³

In conducting the study, the Commission’s researchers registered in each world as an adult over the age of 18, and explored each world’s explicit content offerings as an adult user. The researchers spent 45 minutes searching for sexually explicit content, and 30 minutes doing the same for violently explicit content, creating video recordings of their explorations using the screen recording software Camtasia Studio. After spending time in each world as an adult, the researchers then attempted registration as a teen between the ages of 13 and 17. Again they searched for explicit content for the designated amounts of time and recorded their experiences. Finally, the researchers attempted to register as a child under the age of 13, again recording their experiences (if permitted to register). The Commission’s researchers then reviewed each of the video recordings and documented each instance of sexually explicit and violently explicit content, applying the factors noted above.²⁴

In addition, both to corroborate the survey results and for the purpose of delving deeper into world-specific activities, the Commission sought targeted information from six of the online virtual worlds included in the agency’s survey sample.²⁵ The Commission also conducted interviews with numerous experts in the field and reviewed literature, much of which is cited herein, on virtual world user habits and governance. The next section of the Report analyzes the types of content, including explicit content, the Commission encountered in the online virtual worlds surveyed. The Report then describes the access and community policing measures that operators of online virtual worlds currently employ to restrict minors’ access. Finally, the Report sets forth a set of recommendations that virtual world operators, educators, and parents might consider to limit youth exposure to explicit content in virtual worlds.

TYPES OF CONTENT AVAILABLE IN ONLINE VIRTUAL WORLDS

The 27 online virtual worlds included in the Commission's survey offer an array of features and activities. Some are gaming sites, with well-articulated goals that users pursue; other worlds offer purely social activities; yet others allow users to create and display their own artistic or technological prowess; and some worlds combine aspects of each of these characteristics.

GENERAL FEATURES OF THE ONLINE VIRTUAL WORLDS SURVEYED

The activities offered by the virtual worlds in the Commission's study ranged from design and customization of avatars and spaces, to communications, group entertainment, commerce, and education. Because many worlds also provide opportunities for users to create their own content, the range of possibilities and applications these worlds offer is nearly limitless, subject only to operator guidelines.²⁶

AVATAR CUSTOMIZATION

In creating digital versions of themselves, users of teen- and adult-oriented virtual worlds such as Meez, IMVU, and Second Life can customize their avatars' hair, clothes, accessories, and other features.²⁷ However, virtual worlds geared towards young children appear to afford users less avatar customization.

Along with customizing an avatar's appearance, users select avatar names, which may or may not differ from their real world names. Users may move and animate their avatars in all manner of ways — from walking, to dancing, to flying — using keyboard and mouse functions. In some virtual worlds, avatars can perform sexually or violently explicit acts. Virtual worlds users may also customize personal spaces.²⁸

With so many options for customizing one's avatar's appearance and movements as well as one's personal space, virtual world developers typically set out guidelines, such as minimum clothing coverage requirements.²⁹

COMMUNICATION

Users communicate in online virtual worlds through a variety of means, including text, voice, and video.³⁰ Text-based communication often is automatically made available to users free of charge, in the form of real-time instant messaging, chat boxes appearing in the user's viewer, private messaging, or message boards. A few virtual world operators place limitations on text communication.³¹ Voice communication, such as through Voice Over Internet Protocol (VOIP), and video, such as with a webcam, typically are offered to users as part of a fee-based subscription service.³²

ENTERTAINMENT

Virtual worlds offer a myriad of entertainment opportunities, including in-world games, virtual shopping malls, access to music and movies, forums on a variety of topics, and numerous activities that users can perform to earn in-world currency.³³

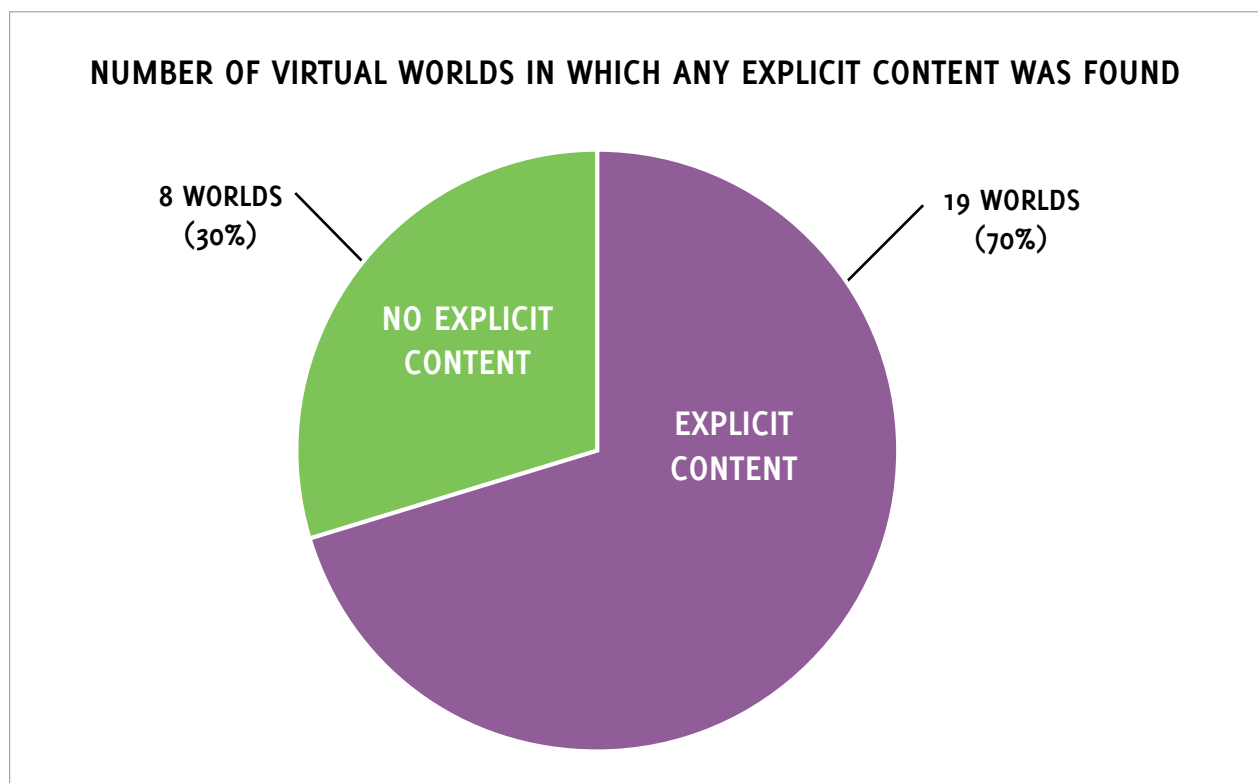
COMMERCE

Linden Lab, the creator of Second Life, has been credited with creating the first currency system in a virtual world.³⁴ This model has been replicated in many other virtual worlds to varying degrees.³⁵ All of the online virtual worlds in the Commission's survey except one had some type of in-world monetary system.³⁶

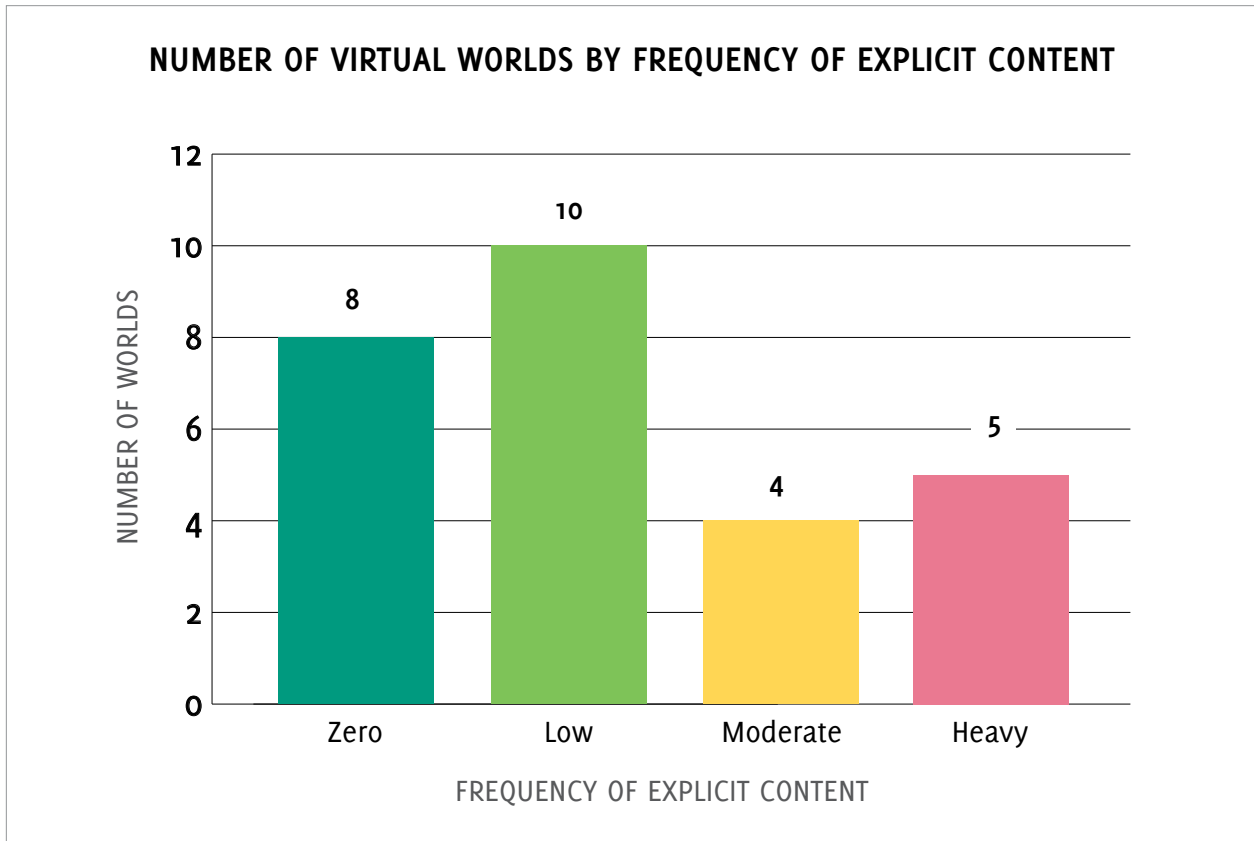
AVAILABILITY OF EXPLICIT CONTENT IN THE ONLINE VIRTUAL WORLDS SURVEYED

Congress directed the Commission not only to report on the types of content generally available in online virtual worlds, but also to investigate whether explicit content exists in these worlds, and if so, whether such content can be accessed by minors. The Commission's study, therefore, was specifically aimed at locating explicit content in online virtual worlds, and determining what steps, if any, world operators took to prevent minors from viewing such content.

As is fully described in Appendix B (setting forth the Commission's survey methodology), the Commission surveyed content offerings on 27 online virtual worlds that permit users to interact free of charge.³⁷ Overall, the Commission found no explicit content in eight of the online virtual worlds surveyed but did find at least one instance of either sexually or violently explicit content in 19 of the 27 worlds.



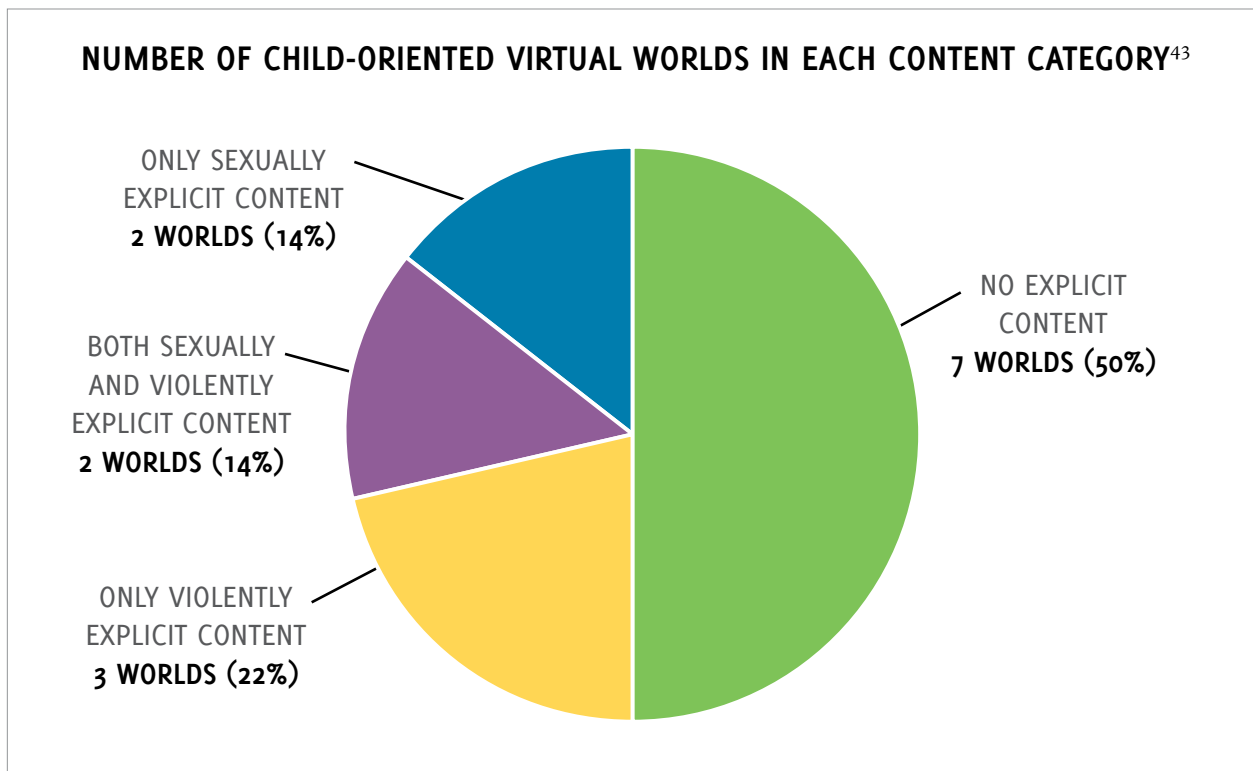
Despite this seemingly high statistic, the Commission found very little explicit content in most of the virtual worlds surveyed, when viewed by the actual incidence of such content. In 10 of the 19 worlds in which explicit content was found, the Commission observed only a low amount of such content.³⁸ In another four worlds, the Commission observed a moderate amount of explicit content,³⁹ and in the five remaining worlds, the Commission observed a heavy amount of explicit content.⁴⁰



The Commission then looked more closely at the types of worlds in which explicit content was found, dividing the worlds into two categories — those that permitted children under age 13 to register (“child-oriented virtual worlds”), and those that did not (“teen- and adult-oriented virtual worlds”).

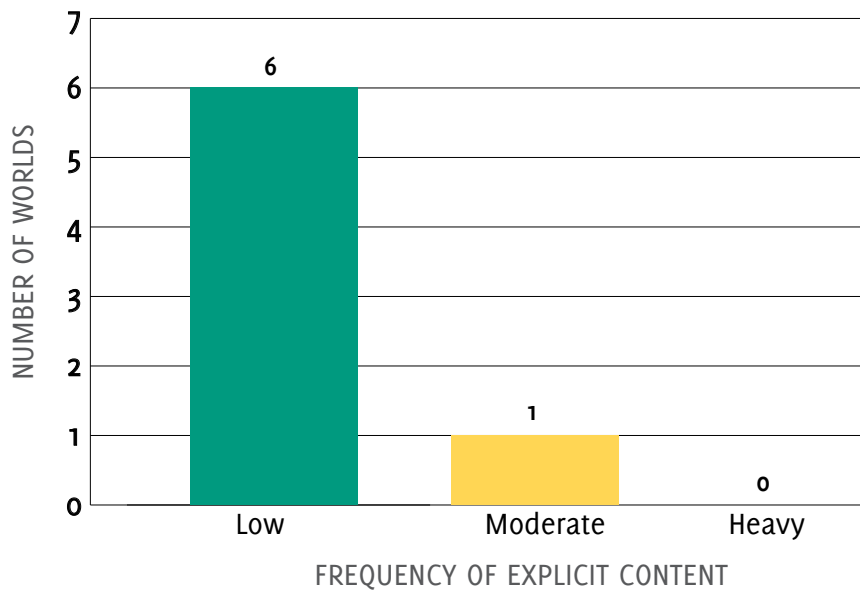
CHILD-ORIENTED VIRTUAL WORLDS

Fourteen of the 27 online virtual worlds in the Commission's survey were open to children under age 13. Of these 14 virtual worlds, the Commission found at least one instance of explicit content on seven of them.⁴¹ Significantly, however, with the exception of one world, Bots, all of the explicit content observed in the child-oriented worlds occurred when the Commission's researchers visited those worlds as teen or adult registrants, not when visiting the worlds as children under age 13.⁴²



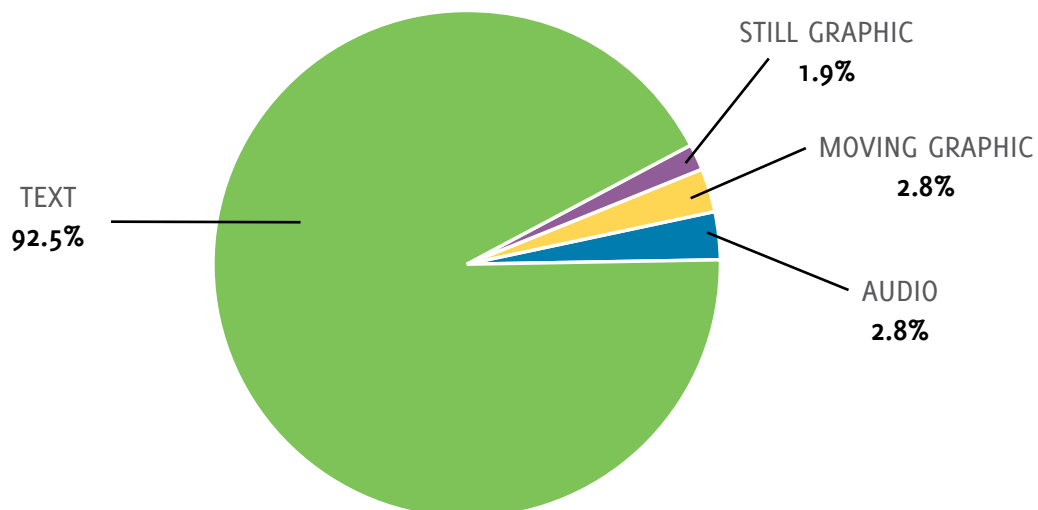
Moreover, in *six* of these seven child-oriented virtual worlds, the amount of explicit content observed was low.⁴⁴ Only in the seventh child-oriented world, Stardoll, did the Commission find a moderate amount of explicit content. Because the Commission's researchers examined these worlds with the express purpose of uncovering sexually and violently explicit content, it is unlikely that a typical user would stumble upon such content unintentionally.⁴⁵

CHILD-ORIENTED VIRTUAL WORLDS IN WHICH EXPLICIT CONTENT WAS FOUND, BY FREQUENCY OF EXPLICIT CONTENT



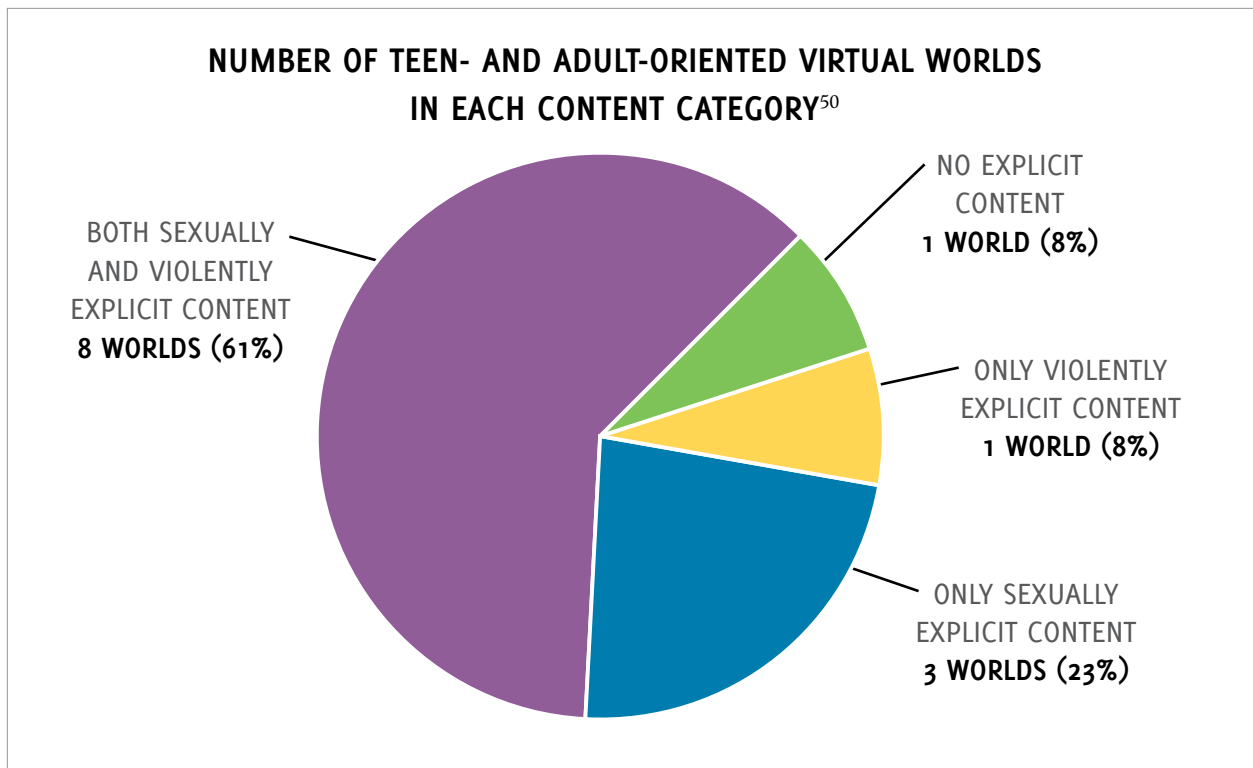
Almost all of the explicit content in the six child-oriented virtual worlds in which the Commission observed a low amount of such content was text-based and was found in chat rooms, message boards, and discussion forums. In the seventh child-oriented virtual world, Stardoll, almost all of the explicit content observed was in the form of violently explicit text posted on discussion boards.⁴⁶ Again, however, none of the explicit content observed on Stardoll occurred when the Commission’s researchers registered as a child under age 13.⁴⁷

OF THE CHILD-ORIENTED VIRTUAL WORLDS IN WHICH EXPLICIT CONTENT WAS FOUND, BREAKDOWN OF EXPLICIT CONTENT BY FORM



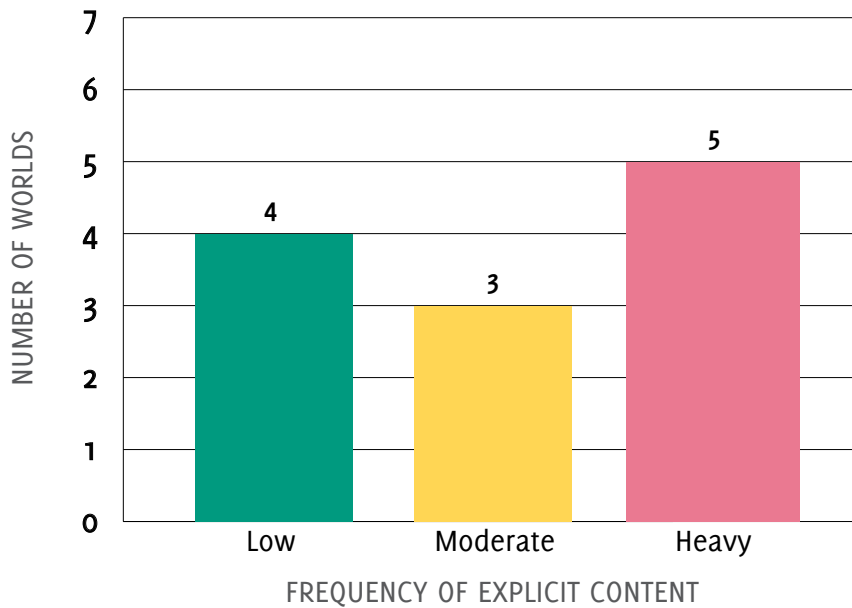
TEEN- AND ADULT-ORIENTED VIRTUAL WORLDS

The Commission found a greater amount of explicit content in the online virtual worlds that purported to be closed to children under age 13 (“teen- and adult-oriented virtual worlds”). Thirteen of the 27 worlds fell into the category of teen- and adult-oriented virtual worlds.⁴⁸ The Commission observed at least one instance of explicit content in 12 of these worlds.⁴⁹



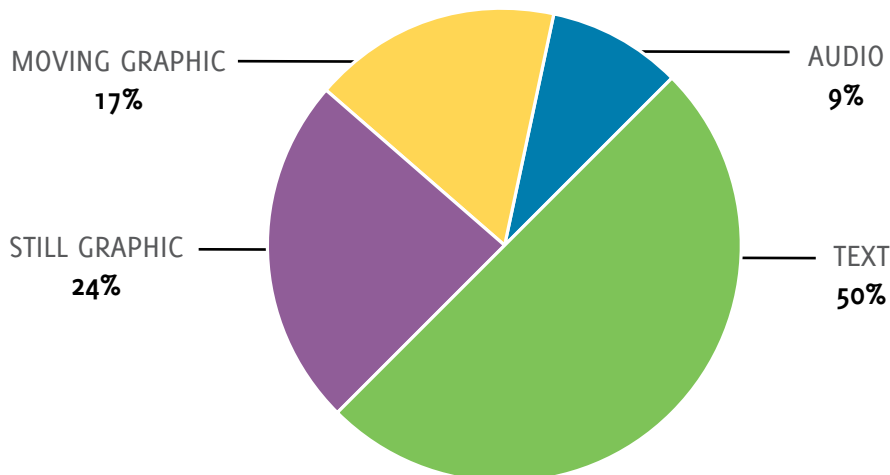
For teen- and adult-oriented virtual worlds, the amount of explicit content observed was more evenly and broadly distributed than for child-oriented virtual worlds. The Commission observed a heavy amount of explicit content in five such worlds, a moderate amount in three worlds, and a low amount in four such worlds.

TEEN- AND ADULT-ORIENTED VIRTUAL WORLDS IN WHICH EXPLICIT CONTENT WAS FOUND, BY FREQUENCY OF EXPLICIT CONTENT



Half of the explicit content observed in the 12 teen- and adult-oriented virtual worlds was text-based and was found in chat rooms, message boards, and discussion forums. The balance of explicit content observed appeared as graphics, occasionally with accompanying audio. Such graphics consisted of photos or illustrations posted on message boards, as sexually or violently explicit animations, or as video.

OF THE TEEN- AND ADULT-ORIENTED VIRTUAL WORLDS IN WHICH ANY EXPLICIT CONTENT WAS FOUND, BREAKDOWN OF EXPLICIT CONTENT BY FORM

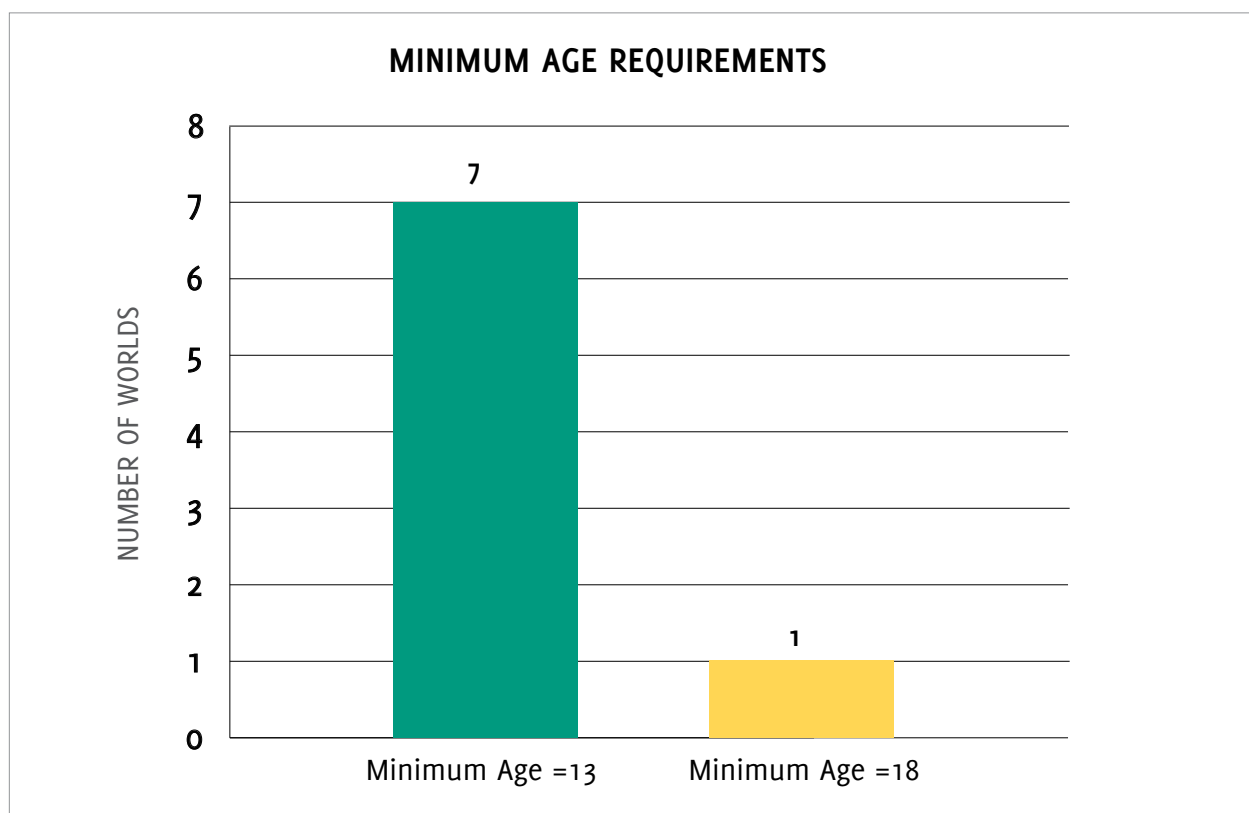


MINORS IN ONLINE VIRTUAL WORLDS: ACCESS AND COMMUNITY POLICING MEASURES

For the eight teen- and adult-oriented online virtual worlds in which the Commission found moderate to heavy explicit content, the Commission examined more closely the methods these worlds used to prevent minors from accessing explicit content.⁵¹ The Commission's examination included testing the age-screening mechanisms in each of these eight worlds. The Commission also directed letters of inquiry to operators of six of these worlds.⁵²

AGE-SCREENING MECHANISMS

All eight of the teen- and adult-oriented virtual worlds with moderate to heavy explicit content had a stated minimum age for participation. Seven worlds set the minimum participation age at 13 years.⁵³ One world, the adult-oriented Red Light Center, set the minimum participation age at 18 years.



Of the seven online virtual worlds that set a minimum participation age of 13, all rejected attempts to register below that age. However, two worlds, Kaneva and There.com, rejected child registrations, but then immediately permitted users to re-register as an adult from the same computer. Kaneva offered only birth years starting at 1996 and earlier, and then transparently flagged for users whose birth date made them 12 years old or less the reason for their rejection.⁵⁴ Another five worlds disallowed underage registrations, and then took the additional step of rejecting immediate attempts to re-register as age-eligible users from the same computer.⁵⁵

Red Light Center's registration process is unique and evolved over the course of the Commission's study. When the Commission conducted its initial test, although Red Light Center had a stated minimum age of 18 to participate, users were not required to enter any date of birth during the registration process. Currently, however, Red Light Center offers two different registration pathways. On one registration page, Red Light Center offers only dates of birth starting at 1991 and earlier.⁵⁶ Accordingly, all users who register through this page automatically are over the world's minimum age requirement. On the other registration page, on which sexually explicit video clips appear immediately adjacent to the registration form, users must enter a date of birth and can select from among all available birth years.⁵⁷ When the Commission's researchers tested this registration page by entering a birth date under age 18, they received an accompanying error message.⁵⁸ However, they were immediately able to re-register from the same computer by adjusting their birth year to an age-eligible date of birth.

Second Life's age-screening system also was unique among the virtual worlds the Commission studied in that Second Life automatically segmented registrants into three age categories, based on the date of birth the users first enters during the registration process. All users registering for the Second Life grid (whether for the adult-oriented Second Life or for Teen Second Life) register at the same URL. Depending on the birth date entered, a user either is rejected (where the age entered is under 13), directed to Teen Second Life (if the age entered is between 13 and 17), or directed to adult Second Life (if the age entered is 18+). In the former two cases, a persistent cookie is set correlating to the entered age, giving the user no access to Second Life at all, or access only to Teen Second Life.⁵⁹

AGE-SEGREGATION INITIATIVES

Three teen- and adult-oriented virtual worlds with moderate to heavy amounts of explicit content — IMVU, Kaneva, and Second Life — have separate “adult only” sections in order to prevent minors from viewing age-inappropriate content.⁶⁰

Kaneva and IMVU offer subscriptions to “Access Pass” sections of the online virtual worlds, which are only available to users who register as 18 years or older and must be purchased using a valid credit card. Users who are not “Access Pass” members do not have access to content or features designated as such.⁶¹ See Appendix D, Figures 1 and 2.

IMVU and Kaneva also use several automated techniques to enforce divisions between minors and adults registered in their worlds.⁶² Both worlds limit search functions between these two age groups. In addition, Kaneva divides its public spaces into under 18 and 18+ categories. Minors are not visible “in world” to Kaneva members who are 18 years or older. IMVU adult users can send messages to minors who are registered as age 13 to 17, and vice versa. However, IMVU does not allow users who are registered as 18 and over to search for users who are registered as age 13 to 17, so they must know an underage user’s avatar name to send him or her a message. For a fee, IMVU offers a voluntary age-verification program whereby adults provide certain items of personal information and are verified as adults, thereby helping verified users establish to other IMVU members that they are engaging with someone whose age is in fact the age indicated on the verified user’s profile.⁶³ Despite these measures, explicit content is easily accessible in these worlds’ general access areas free of charge.

Second Life was in the process of implementing its “Adult Content Initiative” during the Commission’s study. This initiative has several components. World operators first developed and implemented a three-tiered rating system — PG, Mature, or Adult — to be used to identify content and set individual preferences for Second Life users.⁶⁴ Second Life users that host conduct or display content that is sexually explicit or intensely violent (or that depicts illicit drug use) must designate such content as “Adult,” and only users who are payment- or age-verified (“account verified”) may access such content. To become account verified, users must complete a valid payment, generally through use of a credit card or PayPal, or be age-verified, free of charge, through an arrangement that Second Life has with a third-party age verification vendor.⁶⁵ In addition, Second Life will filter search listings so that only account verified users may view adult-oriented “search tags.” Finally, Second Life has created a new adult-oriented portion of its mainland, called “Zindra,” and all adult content previously located elsewhere on the mainland is required to be relocated to Zindra. Nevertheless, like IMVU and Kaneva, at least during the Commission’s review, explicit content was still easily available free of charge in Second Life, without account verification.

Red Light Center’s main purpose is to offer sexually explicit content.⁶⁶ As noted earlier, the virtual world purports to have a minimum participation age of 18, yet it employed no mechanism to limit access to underage users at the time of the Commission’s study. Indeed, when

the Commission selected the virtual world for inclusion in its review, demographic data from comScore, Inc. indicated that nearly 16% of Red Light Center’s users were under age 18.⁶⁷

CONDUCT STANDARDS AND COMMUNITY POLICING

Virtual world operators also attempt to limit certain types of explicit content through community enforcement of conduct standards. These conduct standards usually are articulated in written policies found in Terms of Service and codes of conduct documents that describe, and proscribe, expected user behavior.

Aside from Red Light Center, on which explicit content clearly is anticipated as an accepted form of expression,⁶⁸ the conduct standards for the remaining seven teen- and adult-oriented virtual worlds on which the Commission found moderate to heavy amounts of explicit content all prohibited “offensive,” “obscene,” or “pornographic” material. Three of these virtual worlds also specifically prohibited “sexually explicit” content,⁶⁹ while a fourth simply prohibited “objectionable or explicit content.”⁷⁰ Two virtual worlds described their in-world environments using terms such as “PG-13” or “PG” audiences.⁷¹ Although none of these seven virtual worlds specifically addressed violently explicit content, all of them prohibited content that was “threatening,” “harassing,” or “abusive,” and, in certain cases, that contained depictions of weapons.

Reflecting the inherent difficulty in defining explicit content, virtual world operators often provide little guidance to their users about prohibited conduct beyond the broad, and often vague, terms described above. Moreover, despite these rules of conduct, the Commission found moderate or heavy explicit content in the virtual worlds noted above, an indication that such conduct standards, on their own, are insufficient to stem the creation of or exposure to explicit material.⁷²

Operators rely mostly on community policing measures such as abuse reporting systems, flagging, and live moderators to enforce their conduct policies.⁷³ For example, in Kaneva, users have easy access to the virtual world’s online reporting system. See Appendix D, Figure 3. Kaneva employees and community moderators monitor and review these reports and take action, including removing or blocking content, or deactivating a user’s account, when appropriate.

IMVU users can report abuse from numerous places on the site, including from the homepage, in public rooms, and on message boards and in chat rooms. IMVU also offers a user flagging system in its catalog of virtual goods that enables any registered user to rate an item as being suitable only for Access Pass holders or as completely unsuitable for IMVU. See

Appendix D, Figure 4. Flagged products are monitored by IMVU representatives and may be re-categorized or removed from the site.

On Red Light Center, Second Life, and There.com, users are able to supplement their abuse reports with evidence including screenshots, video, or chat logs. Most worlds claim to take a “zero tolerance” approach to inappropriate behavior between an adult and a minor, and to the suspected presence of an underage user on the site.⁷⁴

In addition to community policing, Gaia, Kaneva, and There.com employ their own live moderators to monitor heavily populated areas of their worlds and help control conduct in those areas. Operators of these worlds reported equipping these moderators with a variety of tools such as the ability to: mute users’ text, instant messaging, or voice chat; “freeze” an avatar’s movement; prevent a user from uploading virtual items into the world; limit visibility to user profiles or spaces; and place long- or short-term bans against accessing the online virtual world. In some worlds, moderators must participate in an ongoing training and evaluation process.

FILTERS

Finally, in an attempt to bolster virtual world rules, three of the eight teen- and adult-oriented virtual worlds in which the Commission found moderate to heavy explicit content claim to employ language filters to automatically prevent objectionable language from being entered or viewed during in-world text-based communications.⁷⁵ These filters take a variety of forms. Some permit users only to communicate via pre-selected phrases, while others fail to display problematic words when entered by a user, or replace blacklisted terms with symbols or random characters. These filters are applied automatically, although one world, Gaia, reported to the Commission that users have the ability to choose between four levels of language filtering, ranging from “None” to the default setting of “Very Strong Filtering.”⁷⁶

Although filtering technologies help sites leverage limited human oversight of online virtual worlds,⁷⁷ the Commission’s study uncovered the limits of reliance upon filters as currently designed to reduce the presence of explicit content, even text-based explicit content. Of the three teen- and adult-oriented virtual worlds purporting to have filters, the Commission found a heavy amount of explicit text in one of these worlds, a moderate amount of explicit text in one world, and a low amount in the remaining world.⁷⁸ In many of these instances, users employed creative misspellings of explicit terms, perhaps in an attempt to evade the worlds’ profanity filters.

RECOMMENDATIONS

As reported above, the Commission found very little explicit content on virtual worlds open to children under age 13. The Commission found a greater concentration of explicit content in worlds that permit teens to register, and where teens are likely to congregate. Although some of the teen- and adult-oriented online virtual worlds in which the Commission observed explicit content have taken steps to restrict minors' access to explicit content, their efforts have not fully succeeded. Virtual world operators can do more to limit youth exposure to explicit content. Given important First Amendment considerations, the Commission supports virtual world operators' self-regulatory efforts to implement these recommendations.

ACCESS TO ONLINE VIRTUAL WORLDS

At a minimum, operators of virtual worlds should ensure that the age-screening mechanisms they employ, while clearly no cure-all for underage access, do not encourage underage registration. Online data entry points should be designed to allow users to enter their age accurately, and operators should avoid including messages during the registration process that signal to users that there is an appropriate age for entry.⁷⁹ Moreover, once a user has entered a date of birth indicating that he is under the minimum age for entry, virtual world operators should consider installing mechanisms to prevent easy reentry. Virtual world operators also should consider age-locking mechanisms that automatically direct younger users to content more appropriately targeted to their age groups.⁸⁰

These improvements are not foolproof, however, and might be coupled with the following additional measures to help reduce youth access to explicit content in online virtual worlds.⁸¹

SEGREGATING USERS BY AGE

A number of online virtual worlds in the Commission's study employ age-segregation techniques that kept minors from interacting with adults in-world and/or from viewing content designated as "adult only." Operators should consider implementing and strengthening their age-segregation techniques to help ensure that minors and adults interact only with their peers and view only age-appropriate material.

FILTERS

Several online virtual worlds in the Commission's study employ text-based profanity filters programmed to detect specific blacklisted words. In some instances, these filters are applied automatically. In other worlds, users can exercise some control over filter settings.

The strength and value of current Internet filtering systems have been debated. Indeed, the decision overturning the federal Child Online Protection Act ("COPA") turned on whether Internet content filters were more effective than other mechanisms to reduce youth exposure to harmful material online. That case, *ACLU v. Gonzales*, found that Internet filtering products, many of which provide multiple layers of filtering, are now more effective than ever in controlling access to online material.⁸² Some researchers commenting on the outcome of the COPA case concur that filtering objectionable sexual or violent content may be more effective than attempting to legislate sex and violence out of virtual worlds.⁸³

Online virtual worlds that employ basic language filters should re-examine their strength to ensure that they detect and eliminate communications that violate the worlds' conduct standards. In fact, a stronger filter designed to capture violently explicit text may have nearly eliminated the explicit content the Commission found on Stardoll, the one child-oriented virtual world on which the Commission found more than a low amount of explicit content.⁸⁴

COMMUNITY MODERATORS

Virtual world operators primarily rely on user enforcement of conduct standards, backed up in some instances by moderators expressly retained for that purpose. To be effective, a virtual world's standards of behavior must be clear, well-publicized, well-monitored, and backed up by meaningful sanctions for misbehavior. Much more guidance should be given, therefore, to community enforcers so that they understand precisely the kinds of conduct permitted, and prohibited, in-world. With more specific standards, users would be better able to self-police by reviewing and rating online content; reporting the presence of potential underage users; and commenting on users who otherwise appear to be violating a world's terms of behavior.

Users should not have to go it alone in online virtual worlds. Operators should consider using a staff of specially trained moderators whose presence is well known in-world and who are equipped to take swift action against conduct violations.

PARENTAL AND YOUTH EDUCATION

Finally, parents and children alike should become better educated about online virtual worlds. Parents should be aware that:

- **Despite stated age restrictions, underage children may still access teen- and adult-oriented online virtual worlds by falsifying their ages to evade age-screening mechanisms.** Therefore, parents should not overly rely on age-screening mechanisms to keep their children off online virtual worlds;
- **Unlike “old fashioned” video games, today’s online virtual worlds center around the premise of real-time communications, and many have integrated social networking tools into their spaces.** The worlds the Commission studied permitted a wide array of communication vehicles, including not only the ability to chat by text, but also the ability to instant message, meet privately, voice chat, and communicate via webcams. These communication methods are more difficult for parents to monitor and for worlds to filter;
- **In most non-child-directed online virtual worlds, users create the content that is displayed online; the virtual world operator acts merely as a host to users’ own creations.** Therefore, it may be quite difficult to gauge the types of content a child may encounter by a mere review of a world’s Terms of Service or FAQs.

Several independent sources currently provide parental guidance about online virtual worlds. In September 2008, the European Network and Information Security Agency released a guidance document, *Children on Virtual Worlds: What Parents Should Know*.⁸⁵ In January 2009, the Commission issued a consumer alert titled, “Virtual Worlds: Mapping the Risks,” providing guidance to parents about children’s activities in virtual worlds.⁸⁶ Both documents provide a good start for parental education.

Children also should be taught that it is their responsibility to behave appropriately when accessing and playing in online virtual worlds.⁸⁷ Children cannot be adequately protected in online virtual worlds when they represent themselves to be older than they are. Moreover, even properly registered children should be taught to make safe and responsible choices when communicating online, and to be cognizant of the risks posed by playing games and congregating in venues that may be designed for older audiences.

The Commission’s recently issued booklet, “NET CETERA: Chatting with Kids About Being Online,” provides online safety advice for parents of kids at different ages — children, tweens, and teens.⁸⁸ Although not specifically focused on online virtual worlds, sections of

“NET CETERA” cover activities relevant to virtual worlds, such as socializing and communicating online, as well as parental controls. The Commission intends to expand upon this guidance and include information about online virtual worlds in the next edition of NET CETERA.

CONCLUSION

Online virtual worlds provide children and teens with educational, social, and creative opportunities. However, as with other aspects of the Internet, youth may be exposed to explicit content while participating in online virtual worlds. Parents, therefore, should familiarize themselves with the features offered by the online virtual worlds their children visit. For their part, operators should ensure that they have mechanisms in place to limit youth exposure to explicit content in their online virtual worlds.

ENDNOTES

1. The Joint Explanatory Statement accompanying the FY 2009 Omnibus Appropriations Act (Public Law 111-8, enacted March 11, 2009) directed the Federal Trade Commission to submit a report to the Senate and House Committees on Appropriations regarding “virtual reality web programs.” Specifically, the statement read:

Concerns have been raised regarding reports of explicit content that can be easily accessed by minors on increasingly popular virtual reality web programs. The FTC is directed to issue a consumer alert to educate parents on the content that is available to children on virtual reality web programs. In addition, no later than nine months after enactment of this Act, the FTC shall submit a report to the House and Senate Committees on Appropriations discussing the types of content on virtual reality sites and what steps, if any, these sites take to prevent minors from accessing content.

In January 2009, the Commission issued the requested consumer alert, “Virtual Worlds and Kids: Mapping the Risks,” available at <http://www.ftc.gov/bcp/edu/pubs/consumer/alerts/alt038.pdf>.

2. Paul R. Messinger, Eleni Stroulia & Kelly Lyons, A Typology of Virtual Worlds: Historical Overview and Future Directions, *Journal of Virtual Worlds Research*, Vol. 1, No. 1, at 3 (July 2008), available at <http://journals.tdl.org/jvwr/article/view/291/245>.
3. An “avatar” is a “digital representation (graphical or textual), beyond a simple label or name, that has agency (an ability to perform actions) and is controlled by a human agent in real time.” See Mark W. Bell, “Toward a Definition of Virtual Worlds,” *Journal of Virtual Worlds Research*, Vol. 1, No. 1, at 3 (July 2008), available at <http://journals.tdl.org/jvwr/article/view/283/237>. For general descriptions of the types of activities available in online virtual worlds, see kZero Ltd., “Kids, Tweens, & Teens Virtual World Case Study,” at 2 (2009) (listing 50 virtual worlds with screenshots and descriptions); Eur. Network and Info. Sec. Agency [ENISA], *Children on Virtual Worlds: What Parents Should Know* (Sept. 2008), at 11, available at http://www.enisa.europa.eu/doc/pdf/deliverables/children_on_virtual_worlds.pdf (hereafter “ENISA, *Children on Virtual Worlds*”).
4. In some instances, the online activities and experiences in virtual worlds can even affect users in the offline world. One scholar, Professor Joshua Fairfield of Washington & Lee University School of Law, has observed:

The border between virtual and real worlds is porous. Within virtual worlds, people assume new, electronic identities and develop group identities. Paradoxically, virtual-world inhabitants value the anonymity the new setting brings, but immediately set about establishing real-world friendships and even romantic relationships that require them to reveal real-world information about themselves. Similarly, economic activity within virtual worlds affects real-world economies, and vice versa. Some people simply treat a virtual world like a game. Other people pay real money for virtual items in order to better enjoy the virtual world. Still others work in virtual worlds and convert virtual-world currency into money in order to make a living.

Joshua A.T. Fairfield, *Anti-social Contracts: The Contractual Governance of Virtual Worlds*, 53 McGill L. J. 427, 434 (2008). According to Viximo, a company that markets virtual goods to social networking, gaming, and online dating websites, “[v]irtual goods have become the Internet’s new revenue machine,” with U.S. consumers spending an estimated \$400 million on virtual goods in 2009 alone. Viximo, *Virtual Goods: New Frontier of Online Merchandise*, <http://viximo.com/publishers/about/why> (last visited Nov. 19, 2009). One virtual world open to users 13 and older – Meez – reported that 30% of its \$5 million-\$10 million in revenue over the past year derived from the sale of virtual goods such as branded clothing, room decorations, and virtual pets. Patrick Hoge, *The Virtues of Virtual*, San Francisco Business Times, Aug. 7, 2009, <http://sanfrancisco.bizjournals.com/sanfrancisco/stories/2009/08/10/story2.html>.

5. ENISA, *Children on Virtual Worlds*, *supra* note 3, at 11-12; Jeremiah Spence, “Demographics of Virtual Worlds,” *Journal of Virtual Worlds Research*, Vol. 1, No. 2, at 5 (Nov. 2008), available at <http://journals.tdl.org/jvwr/article/view/360/272>. See also Enrique P. Becerra & Mary Ann Stutts, “Ugly Duckling by Day, Super Model by Night: The Influence of Body Image on the Use of Virtual Worlds,” *Journal of Virtual Worlds Research*, Vol. 1, No. 2 (Nov. 2008), available at <http://journals.tdl.org/jvwr/article/view/346/254>.
6. *Virtual Worlds Management Report: 200+ Youth-Oriented Worlds Live or Developing*, Virtual World News, Jan. 26, 2009, <http://www.virtualworldsnews.com/2009/01/virtual-worlds-management-today-released-its-updated-youth-worlds-analysis-based-on-comprehensive-research-available-through.html>.
7. Mark Hefflinger, *Report: Virtual Worlds to Grow at 23% Through 2015*, Digital Media Wire, June 16, 2009, <http://www.dmwmedia.com/news/2009/06/16/report-virtual-worlds-grow-23%25-through-2015>.
8. Virtual worlds consultancy kZero estimates that the number of registered accounts in the virtual worlds sector totaled 579 million globally in the second quarter of 2009. This figure represents an increase of 38.6% from the previous quarter when global registered accounts totaled 417 million. Of these 579 million registered accounts, kZero estimates that nearly 60% are ages 10-15. Approximately 20% of users are ages 5-10, and 15% are ages 15-25. Users over age 25 constitute the minority at 5%. Virtual Worlds News, *Virtual Worlds Popularity Spikes*, July 15, 2009, <http://www.virtualworldsnews.com/2009/07/virtual-world-popularity-spikes.html>. According to research by eMarketer, an estimated eight million U.S. teens and children (ages 3-17) visited virtual worlds on a regular basis in 2008. Virtual Worlds News, *Teen, Pre-teen Migration to Virtual Worlds on the Rise*, May 21, 2009, <http://www.virtualworldsnews.com/2009/05/teen-preteen-migration-to-virtual-worlds-on-the-rise.html>.
9. The number of youth participants in online virtual worlds is projected to grow to over 15 million by 2013, with the most significant growth among the pre-teen (ages 3-11) segment of users. See Virtual Worlds News, *Teen, Pre-teen Migration to Virtual Worlds On the Rise*, *supra* note 8.
10. “Virtual worlds provide opportunities for children to build educational and emotional skills in a variety of ways, for example by helping enhancing imagination and general knowledge, getting stimulated from other things. . . . Young people are encouraged to collaborate together in many of the virtual worlds and to participate in group competitions. These competitions and events build team skills, relationship skills, and creative skills.” ENISA, *Children on Virtual Worlds*, *supra* note 3, at 26.

11. For example, in September 2008, Global Kids, Inc., a nonprofit educational outreach organization based in New York City, launched “Global Kids Second Life Curriculum,” an initiative offering over 160 lesson plans and other resources to help educators incorporate virtual worlds into their work. See Global Kids, *Global Kids’ Groundbreaking Second Life Curriculum Featured at Virtual Worlds Conference in Los Angeles and Tampa*, September 2, 2008, <http://www.globalkids.org/?id=13&news=24>. The “Global Kids Island” in Teen Second Life hosts interactive, experiential programs for teens from around the world. U.S. middle school students have learned about literature by creating animated movies in Second Life based on American literature. See The Virtual Chalkboard, Metanomics Transcript (July 28, 2008), available at <http://www.slideshare.net/WeAreRemedy/072808-the-virtual-chalkboard-metanomics-transcript>. British middle schoolers participating in the Schome Project for 21st Century Learning have used Teen Second Life to build exhibitions of the history of steam engines and to restore a crumbling North Sea historic jetty and convert it into a tourism destination. See video at <http://www.teachers.tv/video/30858#share>.
12. For instance, public health workers associated with the University of Illinois at Chicago School of Public Health have trained in Second Life for scenarios including bioterrorism attacks, epidemics, and natural disasters. The Federal Reserve Bank of Boston has used Teen Second Life to teach teens about finance and banking; the U.S. Army uses Second Life as a recruitment tool; and the Smithsonian Institution has staged exhibits from its islands.
13. The Pew Internet & American Life Project suggests that the interactive nature of computer-based games can foster active learning, and that visual and other sensory components can help simplify complex learning topics. Pew also suggests that online virtual worlds can be used to learn about civics and even encourage more civic participation because of the social benefits that flow from playing games with friends, assuming leadership roles in-game, and playing in teams. See Amanda Lenhart *et al.*, Pew Internet & American Life Project, “Teens, Video Games, & Civics” (Sept. 2008), available at <http://www.pewinternet.org/Reports/2008/Teens-Video-Games-and-Civics/01-Summary-of-Findings.aspx?r=1>.
14. Several recent publications have concluded that children playing in adult-oriented virtual worlds may be exposed to sex play, pornography, gambling, and undesirable contacts, as well as defamation and damage to their reputation. See, e.g., Robin F. Wilson, *Sex Play in Virtual Worlds*, 66 Wash. & Lee L. Rev. 1127 (2009); Robert Bloomfield & Benjamin Duranske, *Protecting Children in Virtual Worlds Without Undermining Their Economic, Educational, and Social Benefits*, 66 Wash. & Lee L. Rev. 1175, 1186 (2009) (“virtual world users can and do position and animate their avatars to make them appear on the screens of the participants – and of other users who have avatars in the area – that their avatars are engaged in explicit sexual activity”); ENISA, *Children on Virtual Worlds*, *supra* note 3, at 21-22.

It should be noted that outside of the virtual worlds context, children explore explicit content online. In a recently released study conducted by information security company Symantec, the terms “sex” and “porn” ranked fourth and sixth respectively among children’s top 100 search terms logged between February 2009 and July 2009. See OnlineFamily.Norton, *School’s Out and Your Kids Are Online: Do You Know What They’ve Been Searching For This Summer?*, Aug. 10, 2009, http://onlinefamilyinfo.norton.com/articles/schools_out.php.

15. See *Availability of Explicit Content in the Online Virtual Worlds Surveyed, infra*.
16. Virtual world experts frequently debate the features that distinguish such worlds from other online communities. Bell, *supra* note 3, at 2. (“There is currently no agreed upon definition, however, and the

term is used in different ways at different times by academics, industry professionals and the media.”); Spence, *supra* note 5, at 3 (“Although no single definition of virtual worlds exists, scholars continue to explore the key factors that separate virtual worlds from non-virtual worlds.”).

See also Bell, *supra* note 3, at 2 (defining a virtual world as “a synchronous, persistent network of people, represented as avatars, facilitated by networked computers”); Ralph Schroeder, “Defining Virtual Worlds and Virtual Environments,” *Journal of Virtual Worlds Research*, Vol. 1, No. 1, at 2 (July 2008), available at <http://journals.tdl.org/jvwr/article/view/294/248> (“Virtual worlds are persistent virtual environments in which people experience others as being there with them – and where they can interact with them”); Posting of Raph Koster to Terra Nova: A Virtual World by any Other Name?, http://terranova.blogs.com/terra_nova/2004/06/a_virtual_world.html (June 9, 2004, 03:20) (“A virtual world is a spatially based depiction of a persistent virtual environment, which can be experienced by numerous participants at once, who are represented within the space by avatars”); ENISA, *Virtual Worlds, Real Money Security and Privacy in Massively-Multiplayer Online Games and Social and Corporate Virtual Worlds* (Nov. 2008), at 8, available at <http://www.enisa.europa.eu/act/it/oar/massively-multiplayer-online-games-and-social-and-corporate-virtual-worlds/security-and-privacy-in-virtual-worlds-and-gaming> (hereafter “ENISA, *Virtual Worlds, Real Money*”) (describing virtual worlds as: “shared and persistent,” “[i]nteractions occur in real-time,” “[t]here is an underlying automated rule set, the ‘physics’ that determines how individuals effect changes,” and “individuals are represented within the world as ‘avatars’”); Nicolas Ducheneaut *et al.*, “Body and Mind: A Study of Avatar Personalization in Three Virtual Worlds,” *Proceedings of CHI 2009* (2009), available at <http://www.nickyee.com/pubs/Ducheneaut,%20Wen,%20Yee,%20Wadley%20-%20CHI%202009.pdf> (“Virtual worlds are immersive 3D environments that enable large numbers of users to interact with one another over the Internet”); Edward Castronova, *Synthetic Worlds*, Chicago: The University of Chicago Press (2004) (virtual worlds are “crafted places inside computers that are designed to accommodate large numbers of people”); kZero, *supra* note 3, at 2 (defining a virtual world as “an online 3D environment where people (avatars) can interact with each other by communication (text or voice chat), collaboration and shared experiences”).

17. Thus, the Commission did not include in its study instant messaging programs, basic chat rooms and message boards, and social networking sites.
18. See Lenhart, *supra* note 13, at 40 (“While gamers can go anywhere within the digital world of an MMOG, the game developer has determined the direction and goals of game play”). Some experts consider MMOGs to be a type of online virtual world, namely, a “closed” virtual world, because of the user’s structured, limited influence on the world. See Alexandra McGill, *Commentary, Virtual Worlds Continuum*, Pew Internet (Feb 6, 2008), available at <http://www.pewinternet.org/Commentary/2008/February/Virtual-World-Continuum.aspx>; Schroeder, *supra* note 16, at 2 (“online games are a subset of virtual worlds; namely, those where the activity revolves around gaming activities,” and are “primarily designed to foster accumulating points or reaching new levels”). Others consider online virtual worlds to be a subset of MMOGs called “social” MMOGs. See, e.g., Phil White, “MMOG Data, Tracked MMOGs,” <http://mmogdata.voig.com/tracked.html> (last visited Nov. 19, 2009). The Commission also excluded from the scope of the study any environment rated by the Entertainment Software Rating Board (“ESRB”).
19. The Supreme Court has developed a three-part legal standard to determine whether a work is obscene: (1) if, taken as a whole by an average person applying contemporary community standards, the work appeals to the prurient interest; (2) if it depicts sexual conduct in a patently offensive way; and (3) when taken as a whole, the work lacks serious literary, artistic, political, or scientific value. *Miller v.*

California, 413 U.S. 15, 25 (1973). Sexual expression that is deemed to be indecent, but does not rise to the level of obscenity, is protected by the First Amendment. See *Sable Communications v. FCC*, 492 U.S. 115, 126 (1989).

20. See MPAA rating criteria, available at http://www.mpa.org/FlmRat_Ratings.asp; see also ESRB rating criteria, available at <http://www.esrb.org/ratings/search.jsp>.
21. For a listing of the 27 worlds in the Commission's survey, a description of survey methodology, and the actual survey instrument, see respectively Appendices A, B and C to this Report. The Commission excluded worlds that required payment because it viewed such a requirement as a mechanism to prevent youth access to such worlds.
22. This cross section also reflected virtual worlds that sustained enough user traffic to be detected by comScore, Inc., ("comScore"), a marketing research company that collects demographic data, such as the number of unique visitors to a website.
23. For example, although RedLightCenter.com is specifically designed for adults ages 18 and older, comScore data indicated that a substantial number of the world's unique visitors were under the age of 18. According to comScore, 5% of Red Light Center's unique visitors in May 2009 were between the ages of 2 and 11. Another 10.8% of the world's visitors for that month were 12-17. See Appendix A.
24. As noted earlier, even though the Commission developed these factors to guide its researchers in identifying explicit content, the task required the researchers to make judgment calls as to whether particular content was explicit. See *supra* *Scope of the Commission's Review*.
25. The six companies from which the Commission specifically requested written information are: Gaia Online (www.gaiaonline.com), IMVU, Inc. (www.imvu.com), Kaneva, LLC (www.kaneva.com), Linden Research, Inc. (<http://secondlife.com/>), Makena Technologies, Inc. (www.there.com), and Uthervers Digital, Inc. (<http://www.redlightcenter.com/index.aspx>).
26. For example, in Second Life, users may use a scripting language called "Linden Scripting Language," or "LSL" to create a range of content roughly equivalent to any content one might be able to draw or animate.
27. Meez offers sophisticated avatar customization from the time of registration, including the ability to change face, eye, nose, and mouth shape, as well as body type. Meez, "Meezmaker," <http://www.meez.com/main.dm>. A Meez user can give his or her avatar freckles, facial hair, makeup, face paint, or even a scar.

In Second Life, new users can choose from among 12 pre-made avatars when they register; after registering, users can customize their Second Life avatars to a much greater extent. The world advertises that, "you can change your clothes, your skin, your hair, your shape and even your gender. You might even choose to make your avatar something nonhuman such as a fish, a robot, or maybe even a potted flower. The only limit is your imagination." See Second Life, <http://www.secondlife.com>. IMVU uses a similar approach. At registration, IMVU users must choose a pre-made avatar, either male or female, but afterwards can further customize clothes, hair, and accessories from a selection of over two million virtual goods, most of which are generated by other users. See IMVU, <http://www.imvu.com>.

28. For example, in Kaneva, members are given homes to furnish and decorate as they choose and to which they can invite other users.
29. There.com sets minimum clothing coverage requirements for users' avatars. IMVU also has a coverage template, to which all articles of clothing must adhere. See Appendix D, Figure 5. Some worlds, like Kaneva, restrict users to Kaneva-supported features and movements, which can vary depending on which part of the world the user is accessing. In Gaia, users may not customize their avatars beyond fixed poses and appearance options.
30. In Second Life, which offers all three communication capabilities, users can host meetings and conferences and even attend university courses.
31. For instance, Red Light Center allows all users to engage in text-based chat, but restricts full private messaging capabilities to "VIP" subscription members.
32. There.com offers voice chat to users who pay a one-time Premium membership fee of \$9.95.
33. On its "Showcase" page, Second Life highlights entertainment activities such as: riding a roller coaster in Prim Hearts Amusement Park; go-kart racing; adopting virtual pets; converting photographs to avatars on Avatar Island; dancing at Ambrosia Dance Club; exploring Mayan ruins and the jungle in the Mexican Tourism Board's virtual Mexico; and playing robotic battle war gaming with players from around the world. See Secondlife.com, "Showcase: Activities," <http://secondlife.com/whatis/showcase/?lang=en-US> (last visited Nov. 19, 2009); see also Appendix D, Figure 6.

There.com promotes activities such as hover boarding, racing, trivia, scavenger hunts, virtual shopping, decorating "your dream home," designing fashion lines, attending virtual parties, and celebrating real-life holidays in the virtual world. See Appendix D, Figure 7.

34. See Yesha Sivan, "3D3C Real Virtual Worlds Defined: The Immense Potential of Merging 3D, Community, Creation, and Commerce," *Journal of Virtual Worlds Research*, Vol. 1, No. 1, at 8 (July 2008), available at <http://journals.tdl.org/jvwr/article/view/278/234>. The basis for Second Life's virtual economy is the "Linden Dollar," or "L\$." Users may buy and sell Linden Dollars on the "Lindex" or "Linden Exchange," which Linden Lab operates. As of September 2009, the exchange rate on the Lindex is approximately 270 Linden Dollars for each U.S. Dollar. Users may sell Linden Dollars on the Lindex and cash out the sale proceeds in U.S. Dollars into their PayPal accounts. Linden Lab monitors and manages the Lindex to keep it stable, and has implemented anti-fraud and anti-money laundering measures.

Given this framework for conducting business, "Second Life has been a starting ground for many real-life companies to explore the opportunities for virtual business and marketing." Lyle R. Wetsch, "The 'New' Virtual Consumer," *Journal of Virtual Worlds Research*, Vol. 1, No. 2 (Nov. 2008), at 2. Many users have even used Second Life to earn money by creating, advertising, and selling virtual goods such as clothing and accessories as well as by operating entertainment venues and offering scripting and creative services to major businesses and universities.

35. Other online virtual worlds the Commission surveyed that had in-world monetary systems include: Gaia, in which users may use "Gaia Cash" purchased with U.S. dollars online and at certain brick-and-

mortar stores, or earned in-world by doing surveys and completing sponsored deals; Neopets, in which users may buy items for their virtual pets with “Neopoints,” earned through playing games, investing in the game’s stock market, and winning contests; and There.com, in which users engage in monetary transactions using Therebucks purchased directly from There.com, from other members, or from third-party online “banks.”

36. Maid Marian did not appear to have an in-world monetary system.
37. See Appendix A for a listing of these 27 online virtual worlds.
38. The Commission defined between 1 and 9 observations of explicit content as “low,” between 10 and 29 observations as “moderate,” and between 30 and 49 observations as “heavy.”
39. The four worlds on which the Commission found a moderate amount of explicit content were IMVU, Kaneva, Stardoll, and There.com.
40. The five worlds on which the Commission found a heavy amount of explicit content were Gaia, Meez, Red Light Center, Second Life, and Vivaty.
41. These seven worlds were: 9 Dragons, Adventure Quest, Bots, Dofus, My Diva Doll, Neopets, and Stardoll.
42. The Commission observed five instances of explicit content when registered as a child in Bots. Four of these observations were of sexually explicit content, and one was of violently explicit content. In addition, the Commission observed two instances of explicit content, both violent, when registered in Bots as an adult. All of the explicit content observed in Bots was text-based.
43. The Commission found only sexually explicit content in Dofus and Neopets; only violently explicit content in 9 Dragons, Adventure Quest, and My Diva Doll; and both sexually and violently explicit content in Bots and Stardoll.
44. Again, the only child-oriented world in which the Commission observed explicit content *when registered as a child* was Bots.
45. In visiting each online virtual world studied, the Commission’s researchers did not put themselves in the place of an average virtual world user. Instead, the researchers were specifically instructed to search for as many different types of explicit content as possible in the time allotted, performing key word searches using explicit terms, looking for explicitly-themed discussion forums and chat rooms, and observing explicit avatar chat.
46. Nineteen of the Commission’s 20 observations of explicit content on Stardoll were violently explicit in nature. Each of the 19 observations of violence arose in the context of text-based posts on discussion boards on topics such as suicide and self-mutilation. The single observation of sexually explicit content was also text-based and described a sexual act.
47. The seventh child-oriented virtual world, Stardoll, automatically provides registrants under age 13 with a “Kid Safe” membership that grants access to doll related games and other members’ “albums.” With a Kid Safe membership, children cannot write any original content, and are unable to access

other users' written content. Kid Safe members are also unable to communicate with other members using the message boards or other fora. To obtain access to additional services, such as blogs, guest-books, friends' lists, and user messaging, children under age 13 must have a Stardoll Community Membership, which requires parental consent. Based on the Commission's research, it appears that Stardoll's Kid Safe membership is effective at keeping children who register as age 12 or under from viewing explicit content in this virtual world.

48. One of these thirteen teen- and adult-oriented virtual worlds, Red Light Center, purports to be closed to persons under age 18. For an in-depth discussion of Red Light Center's registration process, see *Age-Screening Mechanisms, infra*.
49. These 12 worlds were: Gaia, Habbo, IMVU, Kaneva, Meez, Red Light Center, Second Life, Secret of the Solstice, There.com, Vivaty, YoVille, and Zwinktopia. Wind Slayer was the only teen- and adult-oriented virtual world on which the Commission observed no explicit content.
50. The Commission found only sexually explicit content in Habbo, Red Light Center, and Zwinktopia; only violently explicit content in Secret of the Solstice; and both sexually and violently explicit content in Gaia, IMVU, Kaneva, Meez, Second Life, There.com, Vivaty, and YoVille.
51. These eight teen- and adult-oriented online virtual worlds were: Gaia, IMVU, Kaneva, Meez, Red Light Center, Second Life, There.com, and Vivaty. Stardoll, the ninth world on which the Commission found moderate to heavy explicit content, permits users of all ages to register. However, none of the explicit content observed on Stardoll occurred when the Commission's researchers registered as a child under age 13.
52. At the beginning of this study, the Commission sent out letters to operators of six online virtual worlds that the Commission's preliminary research indicated likely contained explicit content. See *supra* note 25 for a listing of these six worlds.
53. The Commission presumes the minimum age of 13 was selected to reflect the definition of a "child" as an individual under the age of 13 in the Children's Online Privacy Protection Act ("COPPA"). See 15 U.S.C. § 6501; 16 C.F.R. Part 312.2. In the Commission's experience enforcing COPPA, many U.S. websites similarly select age 13 as the minimum age for participation in order to avoid having to notify parents and obtain their consent before collecting personal information from a child under age 13. One teen- and adult-oriented virtual world in the Commission's survey, There.com, did offer a parental consent mechanism, initially rejecting registrations from children under age 13, but later allowing registrations from children whose parent sends a fax with written permission to enter There.com's online virtual world.
54. See Appendix D, Figure 8, showing the limited range of birth years offered during Kaneva's registration process. Users who attempt to register as 12 years old on Kaneva receive an error message stating: "We apologize but users under the age of 13 are not allowed to register." Because Kaneva did not appear to employ a persistent blocking mechanism, a 12-year-old child rejected by the site may be able to use Kaneva's rejection notice as a roadmap for an age-eligible, successful re-registration.
55. These five virtual worlds were: Gaia, IMVU, Meez, Second Life, and Vivaty. For example, IMVU's registration system appears to be broken for underage users, refreshing the first page of registration and offering no explanation to a rejected user as to why the system will not accept his information. In

Vivaty, users initially barred from registering because they failed to meet the minimum age requirements received error messages that their emails were “already on file, or blocked.” See Appendix D, Figure 9. In Gaia, similar attempts by underage users to re-register over the minimum age resulted in the appearance of the error message, “Unable to Complete Request. We’re sorry, you must be at least 13 years old to join Gaia Online.” See Appendix D, Figure 10.

56. See <http://www.redlightcenter.com/signup.aspx> (Login -> Members Login -> Create a New Account -> Sign Up for a New Account). See Appendix D, Figure 11.
57. See <http://www.redlightcenter.com/Sites/RLC/download.aspx> (Download -> Create Free Account).
58. The error message stated: “You must be 18 years of age in order to create an account.”
59. Second Life’s age-segmenting measures appear to have had an effect in blocking the existence of explicit content in the Teen Second Life grid. Indeed, all but one of the Commission’s 49 observations of explicit content in Second Life appeared when the Commission’s researchers registered as adults and immediately were sent to the Adult Second Life grid. The one remaining observation of explicit content appeared in Teen Second Life, and may have been an aberration in that world.
60. IMVU, Kaneva, and Second Life reported using age-segregation measures to keep minors from interacting with adult registrants. The Commission’s researchers did not enter “VIP” areas of virtual worlds, nor any other portions of these worlds that required payment for access. Because Red Light Center is designed for adults only, age segregation measures do not apply. The remaining five worlds with moderate to heavy amounts of explicit content – Gaia, Meez, Stardoll, There.com, and Vivaty – do not contain separate “adults-only” spaces. Stardoll, which is open to children under age 13, however, automatically registers such children in its “Kid Safe,” limited membership.
61. IMVU considers content to be “Access Pass” material if it is R-rated or is intended for mature audiences only. Kaneva maintains that it deletes any material that is adult in nature yet is not marked as Access Pass material.
62. Gaia also claimed to require users to be 18 years old, based on their self-reported birth date, in order to view any movie with a rating above PG-13 (R-rated only). However, the Commission’s researchers were able to view full-length R-rated movies such as “Freddy vs. Jason,” “The Grudge 3,” and “The Matrix” when registered as teens on Gaia.
63. At the time of the Commission’s study, IMVU charged \$9.95 for this verification service. Age verification does not automatically grant users access to IMVU’s adult content.
64. See Second Life Maturity Ratings: An Overview, <https://support.secondlife.com/ics/support/default.asp?deptID=4417&task=knowledge&questionID=6010> (last visited Nov. 19, 2009).
65. See Second Life Support Portal, “How to Become Verified as an Adult,” <https://support.secondlife.com/ics/support/default.asp?deptID=4417&task=knowledge&questionID=6362> (last visited Nov. 19, 2009). Second Life users who seek to become age verified must enter certain items of personal information that then is independently checked against publicly available data. Second Life has designed a “match” basis for age verification based on multiple factors. See “Age Verification FAQ,” *id.*

66. See Red Light Center's introductory video on its landing page, <http://www.redlightcenter.com>.
67. See Appendix A.
68. Red Light Center's rules of conduct do prohibit "illegal or inappropriate content (such as copyrighted material, child pornography, hate speech or other offensive material)."
69. See Gaia Rules and Guidelines, <http://www.gaiaonline.com/info/index.php?mode=rules>; IMVU Terms of Use ("Site Etiquette"), http://www.imvu.com/catalog/web_info.php?section=Info&topic=terms_of_service; Kaneva Rules of Conduct, <http://www.kaneva.com/overview/rulesofconduct.aspx>.
70. See Meez Terms of Service Agreement (Section 9, "Objectionable or Explicit Content"), <http://www.meez.com/help.dm?sect=6>.
71. These worlds were There.com and Teen Second Life, respectively. In addition to stating that "Teen Second Life" should follow "PG" guidelines, the Second Life rules of conduct elaborated: "This means no strong vulgar language or expletives, no nudity or sexual content, and no depictions of sex or strong violence." See Second Life, "Community Standards," <http://teen.secondlife.com>.
72. Research has shown that few users read standard form contracts, such as end user license agreements. See Yannis Bakos, Florencia Marotta-Wurgler & David R. Trossen, "Does Anyone Read the Fine Print? Testing a Law and Economics Approach to Standard Form Contracts," Oct. 6, 2009, (N.Y.U. Law & Economics Working Papers), available at http://lsr.nellco.org/cgi/viewcontent.cgi?article=1199&context=nyu_lewp (on file with the Federal Trade Commission).
73. The Commission was not able to evaluate the efficacy of these community policing measures, but instead reports on their existence as described by the companies that responded to the Commission's requests for information.
74. In addition to sending formal abuse reports, online virtual world users often make efforts to prevent others from even introducing explicit content, such as by establishing rules or conditions for chat groups. In a Gaia discussion forum, creators of chat groups sometimes marked topics as "mature," or with warnings like: "All images must be appropriate and with in [sic] the ToS," "You **may not** have explicit rp's (cyber sex) in this thread," "You must be mature to chat here," and "Follow the ToS."
75. These three worlds are Gaia, Kaneva, and There.com. It is possible that other worlds use language filters, but do not indicate to users that they do so.
76. Second Life also employs a form of filtering in its search function so that anyone who is not account verified is blocked from viewing search results tagged with adult terms.
77. See, e.g., Leslie Berlin, "Software That Guards Virtual Playgrounds," *New York Times*, Apr. 19, 2009 ("For moderators, technical advances have changed the nature of the job").

78. The Commission observed a heavy amount (32 observations) of *text-based* explicit content on Gaia, a moderate amount of *text-based* explicit content on There.com (11 observations), and a low amount of *text-based* explicit content on Kaneva (4 observations).

In addition, the child-oriented virtual world Stardoll purported to use a language filter. The Commission observed 20 instances of explicit content, all of which were text-based, on Stardoll. Nineteen of these observations were of violently explicit text, and one was of sexually explicit text. None of this explicit content was observed when the Commission's researchers were registered as a child in Stardoll, and this content may have been nearly eliminated in the teen/adult areas of the world had Stardoll employed a stronger filtering system that took violent, as well as sexual, expression into account.

79. In connection with COPPA enforcement, the Commission has long counseled website operators to ask age information in a neutral manner and to design online data entry points that allow users to enter their age accurately. See FTC's Frequently Asked Questions about the Children's Online Privacy Protection Rule, FAQ 39 ("Can I block children under 13 from my general audience website?"), <http://www.ftc.gov/privacy/coppafaqs.shtm>. An example of a neutral age-screen would be a system that allows users to freely enter their month, day, and year of birth. A process that includes a drop-down menu that only permits users to enter birth years making them 13 or older would not be considered to be neutral, since children cannot enter their correct age. Moreover, a statement that users under age 13 are unable to participate in the online virtual world, or that they should ask their parents before participating, may be viewed as encouraging age falsification.
80. The uniform registration system employed by Second Life, for example, provides a streamlined way for the online virtual world to manage its age groups without automatically telegraphing to users the version of Second Life in which they will be enrolled. Moreover, in their landmark agreements with the State Attorneys General, the social networking sites MySpace and Facebook agreed to implement similar "age locking" mechanisms, thereby making it difficult for users to alter their ages over or under 18 once they initially registered on the social networking sites. See Joint Statement on Key Principles of Social Networking Sites Safety (MySpace Agreement) Jan. 14, 2008, available at http://www.oag.state.va.us/KEY_ISSUES/FAMILY_INTERNET/Joint%20Statement%20on%20Key%20Principles%20of%20Social%20Networking%20Sites%20Safety.pdf; Joint Statement on Key Principles of Social Networking Sites Safety (Facebook Agreement) May 8, 2008, available at http://www.doj.state.wi.us/news/files/Facebook_JointStatement.pdf.
81. The Commission noted in its February 2007 COPPA Report to Congress that age-screening mechanisms that rely on self-reporting only go so far in protecting children from participating in online programs that are not intended for their use. See "Implementing the Children's Online Privacy Protection Act: A Report to Congress" (Feb. 2007), at 13, available at http://www.ftc.gov/reports/coppa/07COPPA_Report_to_Congress.pdf.
82. *ACLU v. Gonzales*, 478 F. Supp. 2d 775 (E.D. Pa. 2007), *aff'd*, *ACLU v. Mukasey*, 534 F. 3d 181 (3d Cir. 2008), *cert. denied*, 129 S. Ct. 1032 (2009).
83. See Joshua A.T. Fairfield, *Virtual Parentalism*, 66 Wash. & Lee L. Rev. 1215, 1238 (2009) ("In short, it is possible to protect adult speakers and child listeners without legislation that threatens to split up virtual worlds"). *But see* "Enhancing Child Safety and Online Technologies: Final Report of the Internet Safety and Technical Task Force to the Multi-State Working Group on Social Networking of State Attorneys General of the United States" ("ISTTF Report") Dec. 31, 2008, at 34, available at http://cyber.law.harvard.edu/sites/cyber.law.harvard.edu/files/ISTTF_Final_Report.pdf

(“Filtering technologies are also limited in their scope. To date, most filtering technologies focus on sexual context and inappropriate language. Some fail to restrict access to violent content, hate content, and self-harm content.”).

84. See *supra* notes 46 and 47.
85. See ENISA, *Children on Virtual Worlds*, *supra* note 3.
86. See “Virtual Worlds: Mapping the Risks,” *supra* note 1.
87. See, e.g., Point Smart. Click Safe, “Task Force Recommendations for Best Practices for Child Online Safety” (July 2009), at 25, available at <http://www.pointsmartreport.org/PointSmartReport.pdf> (“Children must learn to minimize risks but also learn appropriate and ethical behaviors in this digital world”).
88. Federal Trade Commission, “NET CETERA: Chatting with Kids About Being Online” (Oct. 2009), available at <http://www.onguardonline.gov/pdf/tec04.pdf>.

APPENDIX A: SURVEY SAMPLE

LIST OF ONLINE VIRTUAL WORLDS IN THE COMMISSION'S SAMPLE AND MAY 2009 DEMOGRAPHIC DATA

ONLINE VIRTUAL WORLD	URL	TOTAL UNIQUE VISITORS (000) MAY 2009	UNIQUE VISITORS AGES 2-11 (000) MAY 2009	UNIQUE VISITORS AGES 2-11 (%) MAY 2009	UNIQUE VISITORS AGES 12-17 (000) MAY 2009	UNIQUE VISITORS AGES 12-17 (%) MAY 2009
9 Dragons ¹	9dragons.acclaim.com	267	11	4.3	50	18.9
AQ	www.aq.com	974	95	9.8	212	21.8
Bots ¹	bots.acclaim.com	267	11	4.3	50	18.9
Buildabearville	www.buildabearville.com	1,510	366	24.3	212	14.1
Dofus	www.dofus.com/en/	89	11	11.9	20	23.0
Gaia Online	www.gaiaonline.com/	2,756	238	8.6	719	26.1
Habbo	www.habbo.com	811	76	9.3	197	24.3
Handipoints	handipoints.com	238	75	31.4	9	4.0
IMVU	www.imvu.com	2,160	137	6.3	535	24.8
Kaneva	www.kaneva.com	143	8	5.9	31	21.8
Maid Marian	maidmarian.com	650	51	7.9	112	17.2
Meez	www.meez.com	1,461	154	10.6	375	25.7
Millsberry	www.millsberry.com	1,497	277	18.5	247	16.5
My Diva Doll ¹	www.mydivadoll.com	40	1	1.9	4	10.2

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1. The virtual worlds "9 Dragons" and "Bots" are owned by the same company, Acclaim Games, Inc., and are launched from the same landing page. Thus, the comScore data for these virtual worlds are the same. My Diva Doll also is owned by Acclaim, but has its own URL and independent comScore statistics.

ONLINE VIRTUAL WORLD	URL	TOTAL UNIQUE VISITORS (000) MAY 2009	UNIQUE VISITORS AGES 2-11 (000) MAY 2009	UNIQUE VISTORS AGES 2-11 (%) MAY 2009	UNIQUE VISITORS AGES 12-17 (000) MAY 2009	UNIQUE VISITORS AGES 12-17 (%) MAY 2009
Neopets	www.neopets.com	2,279	326	14.3	488	21.4
Pixiehollow	pixiehollow.go.com	1,155	176	15.2	194	16.8
Poptropica	www.poptropica.com	4,655	1,075	23.1	557	12.0
Red Light Center	www.redlightcenter.com	1,540	78	5.0	167	10.8
Runescape	www.runescape.com	4,560	425	9.3	1,072	23.5
Second Life	www.secondlife.com	480	38	8.0	57	11.9
Secret of the Solstice ²	solstice.outspark.com	775	60	7.7	136	17.5
Stardoll	www.stardoll.com	1,588	232	14.6	401	25.3
There	www.there.com	190	40	21.0	29	15.0
Vivaty	www.vivaty.com	160	17	10.3	30	18.7
Wind Slayer ²	windslayer.outspark.com	775	60	7.7	136	17.5
YoVille	www.yoville.com	2,376	179	7.5	237	10.0
Zwinktopia	www.zwinky.com	5,109	472	9.2	808	15.8

Source: comScore

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2. The virtual worlds “Secret of the Solstice” and “Wind Slayer” are owned by the same company, Outspark.com, and are launched from the same landing page. Thus, the comScore data for these virtual worlds are the same.

APPENDIX B: SURVEY METHODOLOGY

In response to the Congressional request to investigate online virtual worlds and the extent of explicit content available to minors in these worlds, the Commission developed a methodology for surveying a sample of the worlds and categorizing their content. After determining what characteristics were necessary to qualify as a virtual world (see *Scope of the Commission's review, supra*, at 2), the Commission conducted an extensive search, consulting resources such as the parental guidance website Commonsense Media (<http://www.common sense media.org>) and virtual worlds news network iVinnie (<http://www.ivinnie.com>), to locate candidate virtual worlds for its survey. This search provided a list of 187 virtual worlds that met the following conditions: (1) the virtual world satisfied the Commission's guidelines for an online virtual world; (2) the parent website that hosted the virtual world received enough traffic to have demographics recorded by comScore, Inc.; and (3) the virtual world was not ESRB-rated.

From the "master list" of 187 virtual worlds, the Commission constructed a sample of 30 worlds whose content would be evaluated. The sample consisted of six pre-chosen virtual worlds identified as potentially containing explicit content;¹ 12 worlds that had the largest number of unique visitors ages 12 to 17 based on demographic data provided by comScore for May 2009, when the sample was constructed;² and 12 worlds selected at random.³ Because one of the worlds, Adventure Rock, could not be accessed by the Commission's researchers, and two other worlds, Webkinz and MyePets, required the purchase of a plush toy for registration, the Commission excluded these worlds from its survey, resulting in a sample of 27 online virtual worlds.

For each of the 27 worlds in its sample, the Commission collected and entered into an Access database preliminary information, accessible without registration, on the following: (1) whether there existed terms of service and/or community guidelines; (2) whether there was an explicit content warning or mention of the use of a language filter; (3) whether there were private spaces available on the virtual world, such that the user could restrict access to a space from other users; (4) whether there were minimum or maximum age restrictions and what verification methods were used by the virtual world to restrict entry of age-ineligible users; (5) whether any necessary software, hardware, or payments were

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1. These worlds were Gaia, IMVU, There.com, Second Life, Red Light Center, and Kaneva.
 2. These demographic data represent the number of unique visitors to the parent website for an online virtual world, not the number of registered users for an online virtual world.
 3. The random component of the sample was designed to gain a broader view of what types of content were generally available.

required to use the virtual world; and (6) details about the registration process. See Appendix C, *Survey Instrument*.

Researchers for the Commission then attempted to register in each of the sampled worlds within three different age groups: adult (18 and above), teen (13 to 17), and child (12 and below).⁴ Where registration was permitted, the researchers conducted a guided search for sexually explicit content for 45 minutes and then a guided search for violently explicit content for 30 minutes.⁵ All searches were recorded with the screen recording software Camtasia Studio. The researchers were instructed to search for as many different types of explicit content as possible in the time allotted, using any search methods available, including reviewing discussion forums and chat boards, performing keyword searches, using maps to explore virtual world offerings, and chatting with and observing other avatars.

The video recordings became the basis for the Commission's content categorization. Each video was divided into three-minute segments (15 time segments for videos searching for sexually explicit content, and 10 time segments for videos searching for violently explicit content) and reviewed for explicit content. Then, for a given three-minute time segment, the Commission documented whether content of a particular type and form was observed during that time segment.⁶ This allowed the Commission to have a measure of how often types of content appeared on a per-minute basis and to make comparisons across online virtual worlds.

Additionally, the content categorization process was replicated for a small sample of the videos recorded by the Commission's researchers. One of these researchers, who had not reviewed and documented instances of explicit content originally, did the replication. The results of the replication showed a 99.5% match rate between the original coders and the replication, ensuring a good measure of reliability for what were clearly subjective decisions made during the content categorization process.⁷

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4. The Commission defined a child in this manner to mirror the definition found in COPPA. See note 53 of the main Report.
 5. See Appendix C for search instructions.
 6. The different type categorizations for both sexually explicit content and violently explicit content are detailed in the *Scope of the Commission's Review* section of the Report. In addition, the content coding distinguished between four different content forms: text, still graphics, moving graphics, and audio. Once a type or form had been identified, there was no count of how many times a coder witnessed that particular combination during the three-minute time segment. For example, once a researcher had read about suicide in a text forum, he would check off the box for suicide/text. If the researcher came across another instance of a discussion of suicide in text form during the **same** three-minute time segment, that additional instance would not be included in the count of explicit content for that video.
 7. For an in-depth discussion of this research issue, see William D. Perreault, Jr. & Laurence E. Leigh, "Reliability of Nominal Data Based on Qualitative Judgments," *XXVI Journal of Marketing Research* 135 (May 1989).

APPENDIX C: SURVEY INSTRUMENT

Survey : Form

Start Background Info Private Spaces Age Requirements Age Verification Demo Payment Info In-Game Money Software Requirements Registration Info Registration Process

INSTRUCTIONS

Instructions for filling out Virtual World Web Form:

- (1) Please answer all of the questions on each tab for each virtual world on your list. If the answer to a question is "No" make sure to choose that answer in the drop-down box. The exception to this will be for the last two tabs on the form (Part A and Part B). You will only answer questions on one of these tabs. You will be directed to the correct tab within the form.
- (2) You can fill out the questions on the form in any order other than the "Start" tab (which you should do first), and the "Registration Process" tab (which you should do last). The tabs are located at the top of the form (you may have to scroll up).
- (3) When taking a screen shot of written material on the virtual world web site, make sure to capture all of the relevant information. This may mean that you need to do more than one screen capture per "button". For example, if the terms of service is longer than the length of your screen, scroll down to where the last screen shot ended and continue capturing the remainder of the terms of service. Paste the second (and other) screen shots directly below the first on the Word document that is pulled up by the button.
- (4) If there are payments (of any kind) that are required before you are allowed to enter the site, do not enter the virtual world (you should however complete all of the questions on the form). Please send an email to (blank) and (blank) detailing what payments were necessary to enter the world before going on to the next virtual world on your list.
- (5) If you have any questions or are having any problems filling out the form, please contact (blank) and (blank) immediately (either by email or phone). We may be able to resolve the issue for you on the spot.

Record: 1 of 1 (Filtered)

Survey : Form

Instructions Start Background Info Private Spaces Age Requirements Age Verification Demo Payment Info In-Game Money Software Requirements Registration Info Registration Process

VIRTUAL WORLD WEB SURF QUESTIONNAIRE

Virtual World Information

Date (MM/DD/YYYY)

Web Surfer's First Name

Web Surfer's Last Name

Virtual World Name

Assigned URL (from list of games)

Final URL (where actual virtual world is found)

Parent Site (if different from virtual world)

Does the virtual world still exist?

If No: Take a screenshot of the error message.

Record: 1 of 1 (Filtered)

Survey : Form

Instructions Start Background Info Private Spaces Age Requirements Age Verification Demo Payment Info In-Game Money Software Requirements Registration Info Registration Process

PRIVATE SPACES

If there is information presented about private spaces before registration, answer the following questions:

Private Spaces
Do private spaces exist in the virtual world?

If Yes: Are the private spaces...

- user generated?
- site generated?
- moderated?
- explicitly governed by the terms of service of community?

Is there an age restriction to having a private space?

Is there a monetary cost for having a private space? If there is, take a

Can access to private spaces be made restricted?

Who controls access to private spaces?

If any other pre-registration content related to private spaces is found, take a screenshot:

Record: 1 of 1 (Filtered)

Survey : Form

Instructions Start Background Info Private Spaces Age Requirements **Age Requirements** Demo Payment Info In-Game Money Software Requirements Registration Info Registration Process

AGE REQUIREMENTS

Age Requirements
Is there a minimum age requirement for registration?

If Yes: What is the minimum age?

Is there a maximum age requirement for registration?

If Yes: What is the maximum age?

Are there suggested ages appropriate for the virtual world?

If Yes: What are the suggested ages?

Age Requirement Screenshots
Is information about restricted and suggested ages found at the following locations?
If Yes: Take a screenshot of where it is found

Landing Page? <input type="text"/>	Terms of Service? <input type="text"/>	Community Guidelines? <input type="text"/>	FAQ Document? <input type="text"/>
Landing Page Screenshot	Terms of Service Screenshot	Community Guidelines Screenshot	FAQ Document Screenshot
Privacy Policy? <input type="text"/>	About Us Page? <input type="text"/>	Parents' Page? <input type="text"/>	Other Location? <input type="text"/>
Privacy Policy Screenshot	About Us Page Screenshot	Parents' Page	Other Location Screenshot

Record: 1 of 1 (Filtered)

Survey : Form

Instructions Start Background Info Private Spaces Age Requirements Age Verification Demo Payment Info In-Game Money Software Requirements Registration Info Registration Process

AGE VERIFICATION

Age Verification
Is an age verification service used?

If Yes: What is the...
name of the verification service?
cost of the verification service?
time required for verification?
Describe any additional details:

Record: 1 of 1 (Filtered)

Survey : Form

Instructions Start Background Info Private Spaces Age Requirements Age Verification Demo Payment Info In-Game Money Software Requirements Registration Info Registration Process

PAYMENT INFORMATION

Is payment required to enter the world?

If Yes: Style of Payment

Is payment in the form of a one-time fee?

If Yes: How much is the one-time fee?

Is payment in the form of a recurring fee?

If Yes: How much is the fee and how often is it paid?

Is payment in the form of a starting account balance?

If Yes: How much is the starting account balance?

Method of Payment

For the following methods of payment, indicate which are accepted for use of the virtual world:

Credit Card

Debit Card

Gift Card

PayPal

Retail Activation Code

Other Method

If Yes: Describe the other method:

If No: Are there areas in the virtual world that require payment to enter?

If Yes: Take a screenshot of information about paying for those areas.

Is the payment for any other items required for use of the virtual world?

If Yes: Describe:

Is another payment style used?

If Yes: Describe:

Record: 1 of 1 (Filtered)

Survey : Form

Instructions Start Background Info Private Spaces Age Requirements Age Verification Demo Payment Info In-Game Money Software Requirements Registration Info Registration Process

IN-GAME MONETARY SYSTEM

If there is information presented about an in-game monetary system before registration, answer the following questions:

Is there a "monetary system" within the world?

If Yes: Is the virtual world's currency acquired through...

- achievements, time, and/or experience in the virtual world?
- real money payments?
- another method?

If Yes: Describe the method:

Are there age restrictions on what you can purchase with the in-game currency?

Take a screenshot of any information related to the monetary system in the virtual world.

Record: 1 of 1 (Filtered)

Survey : Form

Instructions Start Background Info Private Spaces Age Requirements Age Verification Demo Payment Info In-Game Money Software Requirements Registration Info Registration Process

SOFTWARE/HARDWARE REQUIREMENTS

Software Requirements
Are there additional software requirements (excluding standard browser applets e.g. Java, Flash, Quicktime, etc.) to enter the virtual world?

If Yes: Are the extra requirements...
 downloadable?
 on CD/DVD?
 in another medium?

If Yes: Describe the medium:

Hardware Requirements
Are there additional hardware requirements to enter the virtual world?

If Yes: Describe:

Record: 1 of 1 (Filtered)

Survey : Form

Instructions Start Background Info Private Spaces Age Requirements Age Verification Demo Payment Info In-Game Money Software Requirements Registration Process Registration Info

REGISTRATION INFORMATION

Does the virtual world ask that you register?

If No: Continue to Content Analysis

User Name Information

Is registration mandatory?

Does registration ask for a user name?

If Yes: Is a user name mandatory?

Can explicit words be used in the construction of the user name?

If Yes: What explicit words were used?

Does registration ask you to specify a password?

If Yes: Is a password mandatory?

Contact Information

Does registration ask for the user's first and last name?

If Yes: Is the full name mandatory?

Is there a verification process for the full name?

If Yes: Describe the verification process:

Does registration ask for a mailing address?

If Yes: Is an address mandatory?

Is there a verification process for the address?

If Yes: Describe the verification process:

Does registration ask for an e-mail address?

If Yes: Is an e-mail address mandatory?

Is there a verification process for the e-mail address?

If Yes: Describe the verification process:

Does registration ask for a phone number?

If Yes: Is a phone number mandatory?

Is there a verification process for the phone number?

If Yes: Describe the verification process:

Record: 1 of 1 (Filtered)

Survey : Form

Does registration ask for a phone number?

If Yes: Is a phone number mandatory?

Is there a verification process for the phone number?

If Yes: Describe the verification process:

Does registration ask for other information?

If Yes: Describe the additional information requested:

Date Of Birth Information

Does registration ask for a date of birth or age?

If Yes: Is a date of birth or age mandatory?

Is there a verification process for the date of birth or age?

If Yes: Describe the verification process:

For the date of birth or age, does registration ask for...

Only a birth year?

If Yes: Is a birth year mandatory?

How do you specify it? (drop down menu, free-entry, etc)

Only a birth month and a birth year?

If Yes: Are a birth month and a birth year mandatory?

How do you specify it? (drop down menu, free-entry, etc)

A birth day, birth month, and birth year?

If Yes: Are a birth day, a birth month, and a birth year mandatory?

How do you specify it? (drop down menu, free-entry, etc)

A numeric age?

If Yes: Is a numeric age mandatory?

How do you specify it? (drop down menu, free-entry, etc)

Is there a check box for you to indicate that you are over a particular age?

If Yes: What age does that check box specify?

Record: 1 of 1 (Filtered)

Survey : Form

Instructions Start Background Info Private Spaces Age Requirements Age Verification Demo Payment Info In-Game Money Software Requirements Registration Info Registration Process

REGISTRATION PROCESS

Registration as an Adult
 Complete registration as an Adult (enter date of birth as your own or one that falls before 6/1/1991). Use correct identification for any personal information that will be verified by the site. If verification requires payment, do not register and go to the next site on the list.

What date of birth (MM/DD/YYYY) or age (#) did you enter?

Once registration and/or verification is completed continue to Content Analysis Instructions.

Attempt Registration as a Minor
 Does the virtual world have some form of parental consent for Minors? Yes No

Is the minimum age for registration 17 years or less?
 If there is no minimum age requirement, answer No.

If Yes: Answer questions in PART A. If No: Answer questions in PART B.

Record: 1 of 1 (Filtered)

Survey : Form

Start Background Info Private Spaces Age Requirements Age Verification Demo Payment Info In-Game Money Software Requirements Registration Process Registration Info

REGISTER AS A MINOR PART A

PART A - Register as a Minor

Register as a Minor Above Minimum Age and Analyze Content

Complete registration process as a Minor and above the minimum age for registration. Enter a date of birth which falls after 6/1/1991, but makes your age above the minimum age. Use correct identification for any personal information that will be verified by the site. If verification requires payment, do not register and go to the next site on the list.

What date of birth (MM/DD/YYYY) or age (#) did you enter?

Once registration and/or verification is completed continue to Content Analysis Instructions.

Register as Minor Child and Attempt to Register Again as an Adult

Complete registration process as a Minor Child. Enter a date of birth that falls after 6/1/1997. Use your identification for any personal information that will be verified by the site (other than date of birth). If verification requires payment, do not register and go to the next site on the list.

What date of birth (MM/DD/YYYY) or age (#) did you enter?

Does the site allow you to register as a Minor Child?

If Yes: Once registration and/or verification is completed continue to Content Analysis Instructions. If No: Take a screenshot of the error message.

Attempt to complete registration process again as an Adult (enter date of birth as your own or one that falls before 6/1/1991).

What date of birth (MM/DD/YYYY) or age (#) did you enter?

Were you able to register from the same computer as an adult?

If No: Take a screenshot of the error message.

Record: 1 of 1 (Filtered)

Survey : Form

Private Spaces | Age Requirements | Age Verification | Demo | Payment Info | In-Game Money | Software Requirements | Registration Process | Registration Info | Minor Part A | Minor Part B

REGISTER AS A MINOR PART B

PART B - Register as a Minor

Register as a Teen and Attempt to Register Again as an Adult

Is there a minimum age for registration?

Complete registration process as a Minor Teen. Enter a date of birth which falls in between 6/1/1991 and 6/1/1997. Use your identification for any personal information that will be verified by the site (other than date of birth). If verification requires payment, do not register and go to the next site on the list.

What date of birth (MM/DD/YYYY) or age (#) did you enter?

Does the site allow you to register as a Minor Teen?

If Yes: Once registration and/or verification is completed continue to Content Analysis Instructions. If No: Take a screenshot of the error message.

Attempt to complete registration process again as an Adult (enter date of birth as your own or one that falls before 6/1/1991).

What date of birth (MM/DD/YYYY) or age (#) did you enter?

Were you able to register from the same computer as an adult?

If No: Take a screenshot of the error message.

Register as a Minor Child and Attempt to Register Again as an Adult

Complete registration process as a Minor Child. Enter a date of birth that falls after 6/1/1997. Use your identification for any personal information that will be verified by the site (other than date of birth). If verification requires payment, do not register and go to the next site on the list.

What date of birth (MM/DD/YYYY) or age (#) did you enter?

Does the site allow you to register as a Minor Child?

If Yes: Once registration and/or verification is completed continue to Content Analysis Instructions. If No: Take a screenshot of the error message.

Attempt to complete registration process again as an Adult (enter date of birth as your own or one that falls before 6/1/1991).

What date of birth (MM/DD/YYYY) or age (#) did you enter?

Were you able to register from the same computer as an Adult?

If No: Take a screenshot of the error message.

Record: 1 of 1 (Filtered)

The image shows a screenshot of a web browser window displaying a survey form. The browser's address bar shows the URL "http://www.pearsoned.com/". The page title is "Survey : Form". The browser window has several tabs open: "Instructions", "Registration Process", "Minor Part A", "Minor Part B", "Content Analysis Intro", "Sexually Explicit Content", "Violent Explicit Content", "Search Protocol", "Search Protocol Checklist", and "Results". The "Instructions" tab is active.

The main content of the page is titled "INSTRUCTIONS" and provides guidance for filling out a "Virtual World Web Form". The instructions are as follows:

Instructions for filling out Virtual World Web Form:

- (1) For each virtual world on your list, please register for the virtual world (following the instructions on the Access survey form for registration) and then continue to Content Analysis. You should register and complete the video recording in the order of the drop-down menu at the beginning of this survey form (this should be different for each of you).
- (2) **Make sure to register and create an avatar using your own gender.** Please answer all of the questions on each tab for each virtual world on your list. If the answer to a question is "No" make sure to choose that answer in the drop-down box. The exception to this will be for the Minor Part A and Minor Part B tabs. You will only answer questions on one of these tabs. You will be directed to the correct tab within the form.
- (3) When taking a screen shot of written material on the virtual world web site make sure to capture all of the relevant information. This may mean that you need to do more than one screen capture per "button". For example, if the terms of service is longer than the length of your screen, scroll down to where the last screen shot ended and continue capturing the remainder of the terms of service. Paste the second (and other) screen shots directly below the first on the Word document that is pulled up by the button.
- (4) If there are payments (of any kind) that are required before you are allowed to enter the site, do not enter the virtual world (you should however complete all of the questions on the form). Please send an email to (blank) and (blank) detailing what payments were necessary to enter the world before going on to the next virtual world on your list.
- (5) If you have any questions or are having any problems filling out the form please contact (blank) and (blank) immediately (either by email or phone). We may be able to resolve the issue for you on the spot.

At the bottom of the page, there is a "Record:" section showing "1" and "1 (Filtered)".

Survey : Form

Instructions Start Registration Process Minor Part A Minor Part B Content Analysis Intro Sexually Explicit Content Violent Explicit Content Search Protocol Checklist Search Protocol Results

VIRTUAL WORLD WEB SURF QUESTIONNAIRE

Virtual World Information

Date (MM/DD/YYYY)

Web Surfer's First Name

Web Surfer's Last Name

Virtual World Name

Assigned URL (from list of games)

Final URL (where actual virtual world is found)

Parent Site (if different from virtual world)

Does the virtual world still exist?

If No: Take a screenshot of the error message.

Record: 1 of 1 (Filtered)

Survey : Form

Instructions Start Registration Process Minor Part A Minor Part B Content Analysis Intro Sexually Explicit Content Violent Explicit Content Search Protocol Checklist Search Protocol Results

REGISTRATION PROCESS

Registration as an Adult
 Complete registration as an Adult (enter date of birth as your own or one that falls before 6/1/1991). Use correct identification for any personal information that will be verified by the site. If verification requires payment, do not register and go to the next site on the list.

What date of birth (MM/DD/YYYY) or age (#) did you enter?

Once registration and/or verification is completed continue to Content Analysis Instructions.

Attempt Registration as a Minor
 Does the virtual world have some form of parental consent for Minors?

Is the minimum age for registration 17 years or less?
 If there is no minimum age requirement, answer No.

Yes (Part A) No (Part B)

If Yes: Answer questions in PART A. If No: Answer questions in PART B.

Record: 1 of 1 (Filtered)

Survey : Form

Instructions Start Registration Process **Minor Part A** Minor Part B Content Analysis Intro Sexually Explicit Content Violent Explicit Content Search Protocol Search Protocol Checklist Results

REGISTER AS A MINOR PART A

PART A - Register as a Minor

Register as a Minor Above Minimum Age and Analyze Content

Complete registration process as a Minor and above the minimum age for registration. Enter a date of birth which falls after 6/1/1991, but makes your age above the minimum age. Use correct identification for any personal information that will be verified by the site. If verification requires payment, do not register and go to the next site on the list.

What date of birth (MM/DD/YYYY) or age (#) did you enter?

Once registration and/or verification is completed continue to Content Analysis Instructions.

Register as Minor Child and Attempt to Register Again as an Adult

Complete registration process as a Minor Child. Enter a date of birth that falls after 6/1/1997. Use your identification for any personal information that will be verified by the site (other than date of birth). If verification requires payment, do not register and go to the next site on the list.

What date of birth (MM/DD/YYYY) or age (#) did you enter?

Does the site allow you to register as a Minor Child?

If Yes: Once registration and/or verification is completed continue to Content Analysis Instructions. If No: Take a screenshot of the error message.

Attempt to complete registration process again as an Adult (enter date of birth as your own or one that falls before 6/1/1991).

What date of birth (MM/DD/YYYY) or age (#) did you enter?

Were you able to register from the same computer as an adult?

If No: Take a screenshot of the error message.

Record: 1 of 1 (Filtered)

Survey : Form

Instructions Start Registration Process Minor Part A Minor Part B Content Analysis Intro Sexually Explicit Content Violent Explicit Content Search Protocol Checklist Search Protocol Results

REGISTER AS A MINOR PART B

PART B - Register as a Minor

Register as a Teen and Attempt to Register Again as an Adult

Is there a minimum age for registration?

Complete registration process as a Minor Teen. Enter a date of birth which falls in between 6/1/1991 and 6/1/1997. Use your identification for any personal information that will be verified by the site (other than date of birth). If verification requires payment, do not register and go to the next site on the list.
 What date of birth (MM/DD/YYYY) or age (#) did you enter?

Does the site allow you to register as a Minor Teen?

If Yes: Once registration and/or verification is completed continue to Content Analysis Instructions. If No: Take a screenshot of the error message.

Attempt to complete registration process again as an Adult (enter date of birth as your own or one that falls before 6/1/1991).
 What date of birth (MM/DD/YYYY) or age (#) did you enter?

Were you able to register from the same computer as an adult?

If No: Take a screenshot of the error message.

Register as a Minor Child and Attempt to Register Again as an Adult

Complete registration process as a Minor Child. Enter a date of birth that falls after 6/1/1997. Use your identification for any personal information that will be verified by the site (other than date of birth). If verification requires payment, do not register and go to the next site on the list.
 What date of birth (MM/DD/YYYY) or age (#) did you enter?

Does the site allow you to register as a Minor Child?

If Yes: Once registration and/or verification is completed continue to Content Analysis Instructions. If No: Take a screenshot of the error message.

Attempt to complete registration process again as an Adult (enter date of birth as your own or one that falls before 6/1/1991).
 What date of birth (MM/DD/YYYY) or age (#) did you enter?

Were you able to register from the same computer as an Adult?

If No: Take a screenshot of the error message.

Record: 14 of 1 (Filtered)

Survey : Form

Instructions Start Registration Process Minor Part A Minor Part B Content Analysis Intro Sexually Explicit Content Violent Explicit Content Search Protocol Checklist Search Protocol Results

CONTENT ANALYSIS INSTRUCTIONS 1

Time Period to Search
 Please use the following time periods for video taping your exploration of the virtual world and your search for explicit content.

Explicit Sexual Content	45 minutes	Explicit Violent Content	30 minutes
-------------------------	------------	--------------------------	------------

Record: 1 of 1 (Filtered)

Survey : Form

Instructions Start Registration Process Minor Part A Minor Part B Content Analysis Intro Sexually Explicit Content Violent Explicit Content Search Protocol Checklist Search Protocol Results

CONTENT ANALYSIS INSTRUCTIONS 2

Explicit Content Types
The following is intended to serve as a guide of the types of content that we seek to document.

Sexually Explicit Content
In general, we are looking for content that would fit into categories such as "R", "VC-17", "X", or "Mature" rated material.

We are NOT interested in crude humor, body modification (ex: Robotic limbs, tattoos, piercings, etc), references or simulated use of alcohol, tobacco, or illicit drugs, or general profanity (unless it is of graphic sexual content). Additionally, we are not interested in "PG-13" sexual content such as mild to moderate sexual references and/or depictions. This would include any non-transparent lingerie or undergarments that covers genitalia/female breasts.

Types of content for which we are seeking evidence:

MATURE HUMOR - Depictions or dialogue involving sexual references.

NUDITY - Virtual goods depicting full or partial nudity. Depiction of uncovered female breasts and un-aroused male or female genitals are considered part of this category. Depictions of aroused genitalia and/or unrealistic or overly detailed genitals.

CRUELTY TO ANIMALS - Any act, depiction or suggestion of bestiality.

HARM TO MINORS - Any act, depiction, or suggestion of sex to/with minors (anyone under the age of 18).

STRONG SEXUAL CONTENT - Graphic references to and/or depictions of sexual acts including, but not limited to, penetration/intercourse, and/or oral sex with or without another avatar or any other object; additionally, this includes any overt sexual toys and/or aids.

SEXUAL VIOLENCE - Any depiction or description of sexual behavior that has a violent context.

Record: 1 of 1 (Filtered)

Survey : Form

Instructions Start Registration Process Minor Part A Minor Part B Content Analysis Intro Sexually Explicit Content Violent Explicit Content Search Protocol Checklist Search Protocol Results

CONTENT ANALYSIS INSTRUCTIONS 3

Violent Explicit Content
 We are NOT interested in "PG", "PG-13", or "Teen" rated violence such as Cartoon violence, depictions of blood, fantasy violence, or Mild violence - Virtual goods depicting characters in mild unsafe and/or violent situations. This includes realistic weapons that are not used against other avatars or whose intent is not obvious or aggressive harm of other avatars.

Types of content for which we are seeking evidence:

- ANIMATED BLOOD - Animations involving blood.
- BLOOD AND GORE - Depictions of excess/gratuitous blood or the mutilation of body parts.
- HARM TO MINORS - Any act, depiction, or suggestion of violence against minors (anyone under the age of 18).
- CRUELTY TO ANIMALS - Any act, depiction or suggestion of violence toward animals.
- INTENSE VIOLENCE - Virtual goods involving aggressive conflict. Includes but is not limited to realistic weapons used against other avatars or whose intent is obvious, aggressive harm of other avatars; any realistic weapons with blood or gore depicted on them or in their use; graphic and/or realistic-looking depictions of physical conflict, graphic violence, dismemberment, self-mutilation, homicide; anything depicting extremely grotesque images or acts.
- SUICIDE - Any graphic discussions or portrayals of suicide.

Record: 1 of 1 (Filtered)

Survey : Form

Instructions Start Registration Process Minor Part A Minor Part B Content Analysis Intro Sexually Explicit Content Violent Explicit Content Search Protocol Checklist Search Protocol Results

CONTENT ANALYSIS INSTRUCTIONS 4

Search Protocol

Try to search for as many different types of explicit content as possible in the time frame allocated. There are separate time periods that are dedicated to sexual and violent explicit content - try to focus your search on these types of content during that search period. Once you have found one type of explicit content (i.e. partial nudity) continue to search for different types of explicit content. Begin your search as an adult. If you find explicit content while registered as an adult, make an attempt to view the same content (same location or type) as a teen (between the ages of 13 and 17) and then as a child (under the age of 13). If there are explicit content warnings and/or payments (by credit card) required to purchase access to explicit content, make sure to capture as much detail of these as possible.

Time stamp

Make sure that all of your videos have a time stamp on them. The following is an outline of how to put a time stamp on the Camtasia video recordings.

*A system stamp inserts recording information such as time/date and elapsed time into the recording.

1. Before recording, select the system stamp options: Select Effects > Options > Annotation tab > System Stamp.
 - At this point, the researchers can configure the time stamp and a caption (if desired).
 - For the caption, type your initials, the name of the world, and an "S" (for a sexual content search) or a "V" (for a violent content search). Example: "ITK Whyville S"
 - The time stamp should include both the time/date AND the elapsed time of the video.
 - Captions should be configured to appear top-center, and the time stamp should appear bottom-center.
2. Click OK.
3. To enable the system stamp, select Effects > Annotation > Add System Stamp.
 - This requires you to right click on the camera icon that appears in the Windows notification area, bottom right corner of the Windows desktop. This is important because you can not turn on the system stamp by any other means.

The system stamp appears in the recording file until disabled. The system stamp is imprinted into the recording file and appears during the recording preview."

Record: 14 of 1 (Filtered)

Survey : Form

Instructions Start Registration Process Minor Part A Minor Part B Content Analysis Intro Sexually Explicit Content Violent Explicit Content Search Protocol Checklist Search Protocol Results

SEARCH PROTOCOL CHECKLIST

Search for the explicit content using each of the following methods. Check off the items that were available and that you had the time to explore.

Where to look for explicit content

Avatar construction - how explicit can you make your avatar?	Available	Attempted
Visual spaces - what do you "see" when moving around the virtual world?	<input type="checkbox"/>	<input type="checkbox"/>
Text - chat with other avatars, text boxes, chat rooms, blogs, message boards?	<input type="checkbox"/>	<input type="checkbox"/>
Voice and/or sound?	<input type="checkbox"/>	<input type="checkbox"/>
Games - Are there explicit games within the virtual world?	<input type="checkbox"/>	<input type="checkbox"/>
Media (video or still pictures) with explicit content?	<input type="checkbox"/>	<input type="checkbox"/>
Do you see explicit content downloaded from other sites? (i.e. scenes from "R" rated movies)	<input type="checkbox"/>	<input type="checkbox"/>

How to search for explicit content

Attempt to use all search methods that are applicable:

searchable text	Available	Attempted
forums/chat boards	<input type="checkbox"/>	<input type="checkbox"/>
chat with another avatar or observe discussions of other avatars	<input type="checkbox"/>	<input type="checkbox"/>
maps (are there labels as to where explicit content is located)	<input type="checkbox"/>	<input type="checkbox"/>

Record: 1 of 1 (Filtered)

Survey : Form

Instructions Start Registration Process Minor Part A Minor Part B Content Analysis Intro Sexually Explicit Content Violent Explicit Content Search Protocol Checklist Search Protocol Results

RESULTS

Summary

Were you able to enter the Virtual World as an adult?

If Yes: Did you see sexually explicit content as an adult?

Were you able to enter the Virtual World as a teen?

If Yes: Did you see sexually explicit content as a teen?

Were you able to enter the virtual world as a child?

If Yes: Did you see sexually explicit content as a child?

Record: 1 of 1 (Filtered)

SB : Form

Virtual Worlds Record Search

Virtual World Name

Surfer Name

Age Group

Video Type

Video Clip Start Time

Search Records

View Sexual Content Stats

View Violent Content Stats

MW : Form

Observation Data

Session ID

vw_name

Current Date

Web Surfer's Last Name

Inputter's Last Name

Observation Age Group

Observation Trial Number

Observation Date

Video Start Time

Video End Time

Video Type

Sexual Content

Violent Content

The image shows a screenshot of a web browser window displaying a form titled "MW : Form". The form is titled "Observation Data" and contains several input fields and two buttons. The fields are: "Session ID" (a small rectangular box), "vw_name" (a long vertical box), "Current Date" (a box with a dropdown arrow), "Web Surfer's Last Name" (a box with a dropdown arrow), "Inputter's Last Name" (a box with a dropdown arrow), "Observation Age Group" (a box with a dropdown arrow), "Observation Trial Number" (a box with a dropdown arrow), "Observation Date" (a box), "Video Start Time" (a box), "Video End Time" (a box), and "Video Type" (a box with a dropdown arrow). Below the fields are two buttons: "Sexual Content" and "Violent Content". The browser window has standard Windows-style window controls (minimize, maximize, close) in the top-left corner.

Sexual Content : Form

SEXUAL CONTENT

Content ID:
 Session ID:
 Time Interval Start:
 Time Interval End:

vw_name:
 surfer_name:
 trial#:
 video_type:

Content Types Observed (check all that apply)

	Text	Still graphic	Moving graphic	Audio	
Mature humor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If Other is checked under any category, describe: <input style="width: 100px; height: 40px;" type="text"/>
Nudity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Cruelty to animals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Harm to minors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Strong sexual content	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sexual violence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

A. For any of the explicit content observed
 Prior to viewing and/or participating in the explicit content, was there:
 an explicit content warning?
 an age verification requirement?
 payment required (in real or world currency)?

B. Invitation to join in explicit content activities
 Was the surfer invited to view the sexual content?
If Yes: Check the appropriate boxes to indicate how the surfer was invited to view the explicit content:
 Another Avatar
 Pop-up Text Box
 Sign within the Virtual World

Record: 1

Violent Content : Form

VIOLENT CONTENT

Content ID: vw_name:

Session ID: surfer_name:

Time Interval Start: trial#:

Time Interval End: video_type:

Content Types Observed (check all that apply)

	Text	Still graphic	Moving graphic	Audio	
Animated blood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If Other is checked under any category, describe:
Blood and gore	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Harm to minors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Cruelty to animals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Intense violence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Suicide	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>

A. For any of the explicit content observed
 Prior to viewing and/or participating in the explicit content, was there:
 an explicit content warning?
 an age verification requirement?
 payment required (in real or world currency)?

B. Invitation to join in explicit content activities
 Was the surfer invited to view the violent content?
If Yes: Check the appropriate boxes to indicate how the surfer was invited to view the explicit content:
 Another Avatar
 Pop-up Text Box
 Sign within the Virtual World

Record: of 3

APPENDIX D: SCREENSHOTS

FIGURE 1: KANEVA'S ACCESS PASS

Welcome: [Shop In](#) [Join Now](#)
[SHOP](#) [BUY CREDITS](#)

Create Play Connect

kaneva BETA

World of Kaneva
Share your passions, find your cause. Kick back with your favorite people in a kick-butt 3D hangout.

[Install Now!](#)

Shop now for hundreds of new items -- cool clothes, stylish furniture and more!

[Buy Credits](#)

Access Pass
Over 18? Get Your Access Pass!

Now available exclusively to members 18 and over . . . an access pass to the hottest entertainment and accessories available in the Virtual World!

Kaneva's Access Pass includes:

- Access to restricted (18 and over) clubs and hangouts
- Exclusive clothing and accessories for restricted areas
- Special privileges only Access Pass members enjoy
- Access to private events
- And more!

For a limited time, buy your annual Access Pass for \$14.99!
Or, better yet, upgrade to the Access Pass Combo Pack and receive EXTRA clothes!

[Buy Access Pass Now!](#)

How Do I Get One?

- 1 In the Virtual World Mall, find a store that sells Access Pass-only items -- lingerie, for instance -- and attempt to buy the item. You'll be given the option to buy an Access Pass. Or, click the link above.
- 2 The next time you try to buy an Access Pass item, or enter an Access Pass hangout, you will be able to continue.

FIGURE 2: IMVU'S ACCESS PASS

The image is a screenshot of an advertisement for IMVU's Access Pass. At the top, the headline reads "Join A Community Within the Community!". Below this is a navigation bar with buttons for "Scene 1" through "Scene 8". The main visual is a virtual scene with three avatars: a blonde woman in a blue dress, a blonde man in a blue shirt and jeans, and a woman with red hair in a black dress. A circular sign in the scene says "No Kids and Over 18 ADULTS ONLY!". Below the scene, the text reads "Introducing IMVU's AP representative: Nola". To the right, a large yellow price tag says "\$19.95" and a pink button says "Buy Now!". At the bottom, a red banner says "Access Pass Features".

Join A Community Within the Community!

Scene 1 Scene 2 Scene 3 Scene 4 Scene 5 Scene 6 Scene 7 Scene 8

THE COMMUNITY WITHIN THE COMMUNITY!

Introducing IMVU's AP representative: *Nola*

Get the Access Pass now for only **\$19.95**

Buy Now!

Access Pass Features

Get more from IMVU with an AP (Access Pass):

The Access Pass (AP) is a feature available to adults age 18 or older. The Access Pass helps adults connect online in a safe environment.

FIGURE 3: KANEVA'S ABUSE REPORTING SYSTEM

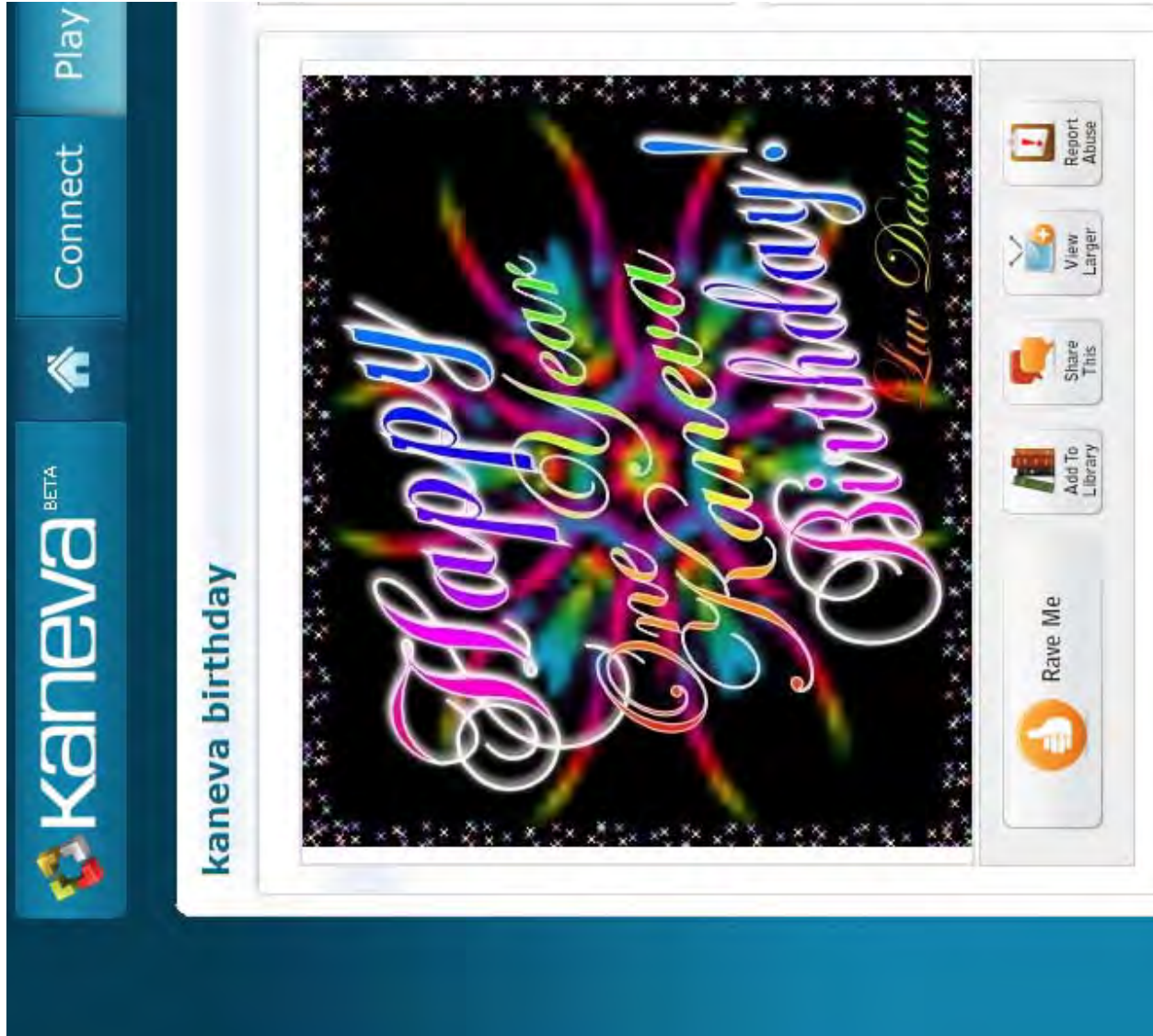


FIGURE 4: IMVU'S USER FLAGGING SYSTEM

IMVU > 3D Chat Rooms

public rooms

- [Public Rooms List](#)
- [How Can I Make My Own Room?](#)
- [Frequently Asked Questions \(FAQ\)](#)
- [IMVU Public Rooms Discussion Group](#)

3d chat rooms

Club de la Sonique
by [BfriendlyEcreative](#)
Lovers of dance unite! Why not visit to meet other people who like to celebrate? Click around the room to explore, click on your avatar and other avatars to perform animations!

Room D/L Size: n/a | Participants: 5 / 10 | [Join](#) | [Flag as inappropriate](#)

name	size (KB)	name	size (KB)
Guest_Nayril	1,653	Guest_babygcht...	618
Guest_cjgangst..	1,334	KylalaAllesandra	1,268
		Guest_gazzer	804

Search:

Go to page: **1** of 1878

FIGURE 5: IMVU'S MINIMUM COVERAGE GUIDELINES

General Audience items MUST cover the areas in red below. Additionally, GA clothing items must cover the red areas shown below in a manner that is commonly acceptable to IMVU's GA audience (i.e. no "pasties")

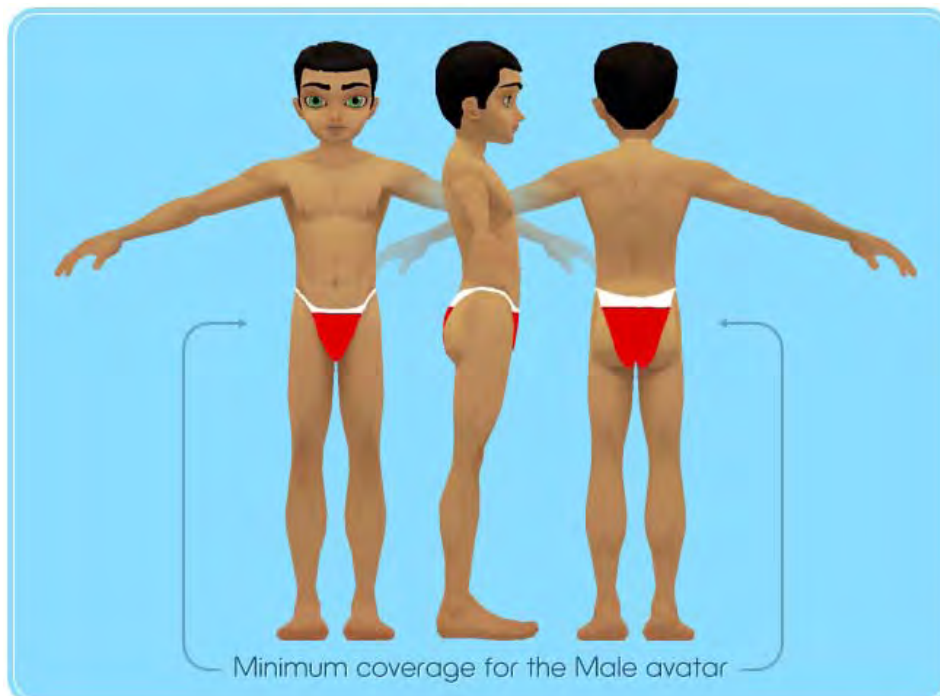
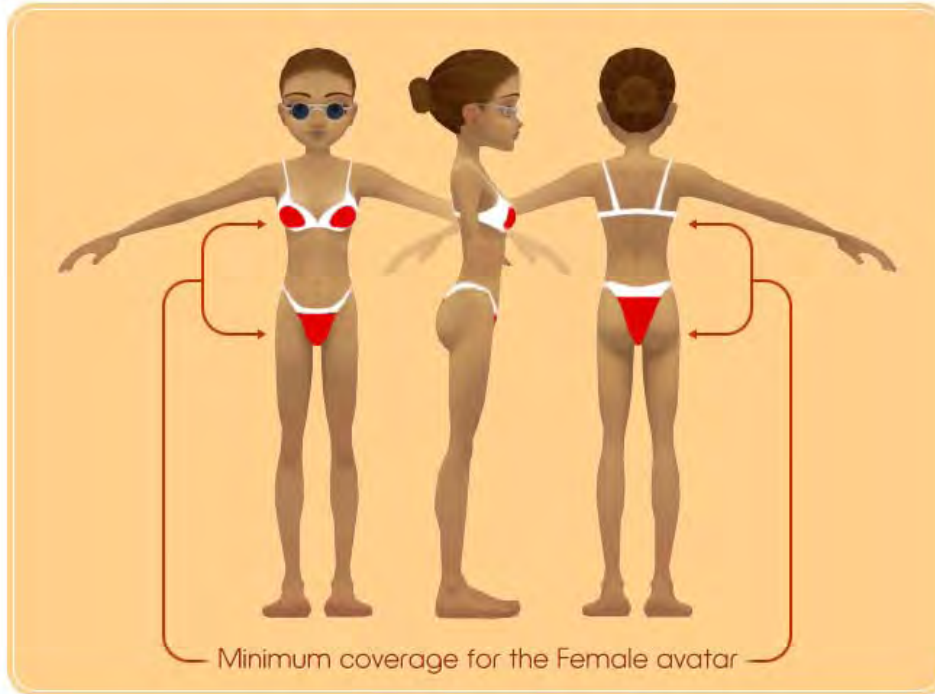


FIGURE 6: EXAMPLES OF ONLINE VIRTUAL WORLD ACTIVITIES – SECOND LIFE'S SHOWCASE

Join Now >>
It's fast, free and easy!

Showcase
Activities
Places

What is Second Life? **World Map** **Shopping** **Buy Land** **Community** **Help**

SECOND LIFE

Showcase: Activities

There are a world of things to do in Second Life. Here are a few favorites.

Prim Hearts
Spend the day at the Prim Hearts amusement park, a fun spot that includes a log ride, bumper cars, carnival rides and more!

KJ Racing
Free karting for the whole family, with free karts available, free game zone, club, bar and hangout.

Zooby's Pets
The most realistic pets the virtual world has seen - come find a new furry friend.

Avatar Island
Convert your photograph to a face texture for your 3D persona at Avatar Island.

Ambrosia Dance Club
This dance club is so fun! It has been in Second Life for two years and has a great following. It is just like a classy club.

Erie Isle
Venture to a haunted island where few have ever returned.

FIGURE 7: THERE.COM'S ACTIVITY HIGHLIGHTS

The image is a screenshot of the There.com website. At the top left, the logo features a red and blue circular icon next to the word "There" in bold, followed by the tagline "Your friends are here." in red. A horizontal navigation bar contains the following links: "There Is", "Company", "Opportunities", and "Member Info". Below this, a secondary navigation bar includes "Get Started", "Keep It Safe", and "Create & Sell". On the right side of the top navigation bar, there is an orange button labeled "SIGN UP NOW".

The main content area features a large header image of a purple dragon with riders flying over a green landscape. Below this image is the text "Check out all the cool things you can do!". To the right of this text is a horizontal carousel of four smaller images: a purple dragon, a red umbrella on a lawn, a group of people in a virtual environment, and a virtual fashion show. Below the carousel is a blue button with a right-pointing arrow. Further right is a section titled "Let Your Imagination Go Crazy" with a sub-header "Decorate your dream home, design your own fashion line, or create a super-cool ride that gets everybody's head turning." This section includes a blue button with a left-pointing arrow and a blue button with an up-pointing arrow.

FIGURE 8: KANEVA'S REGISTRATION PAGE AND REJECTION NOTICE

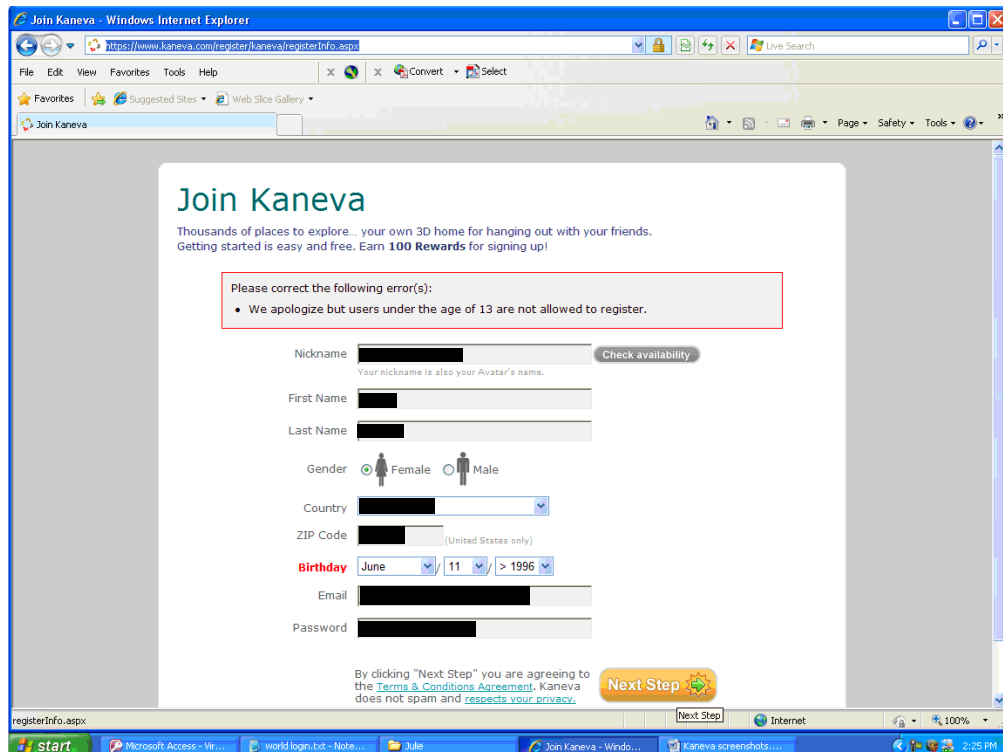
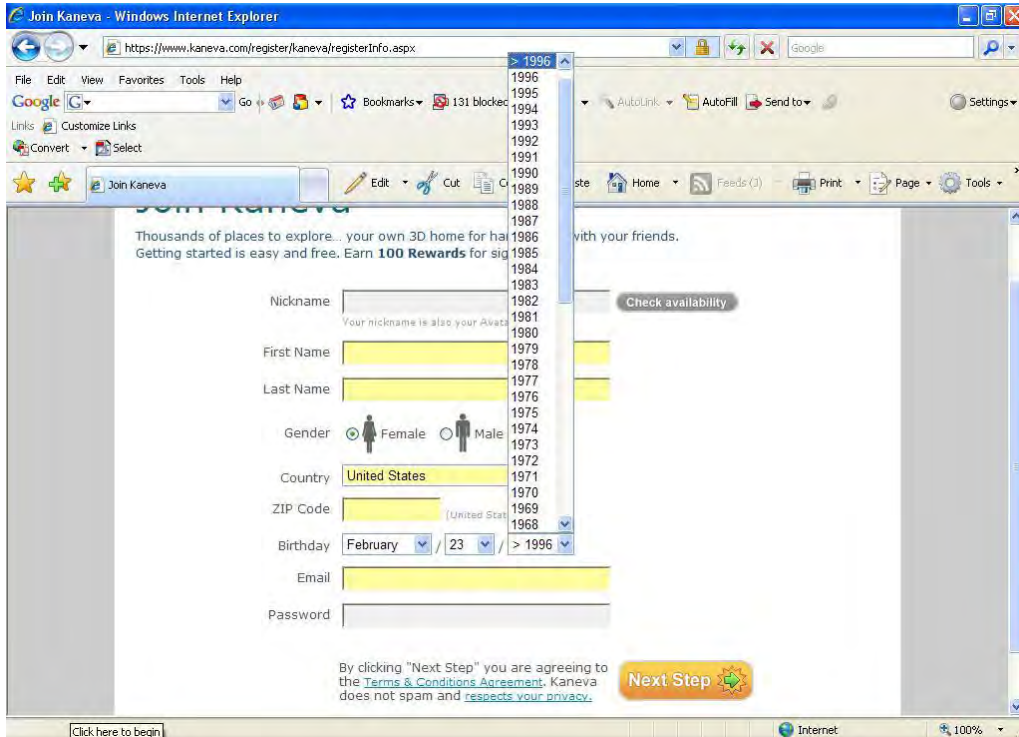


FIGURE 9: VIVATY'S ERROR MESSAGES TO UNDERAGE REGISTRANTS

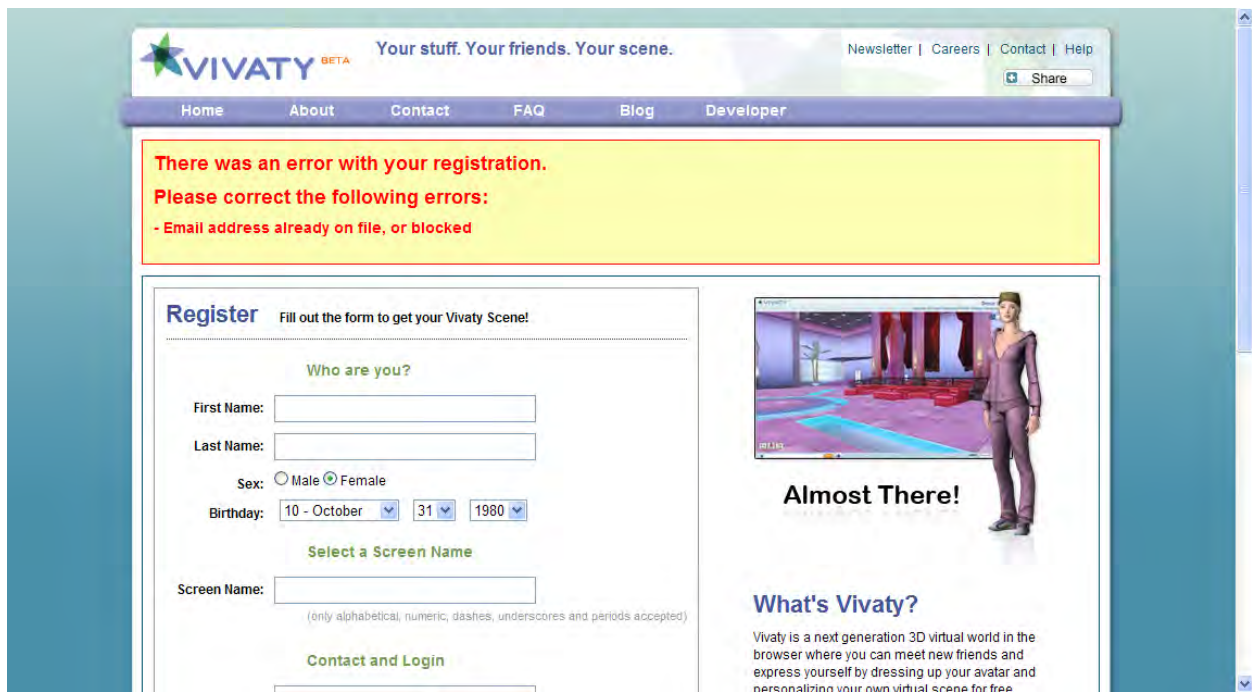
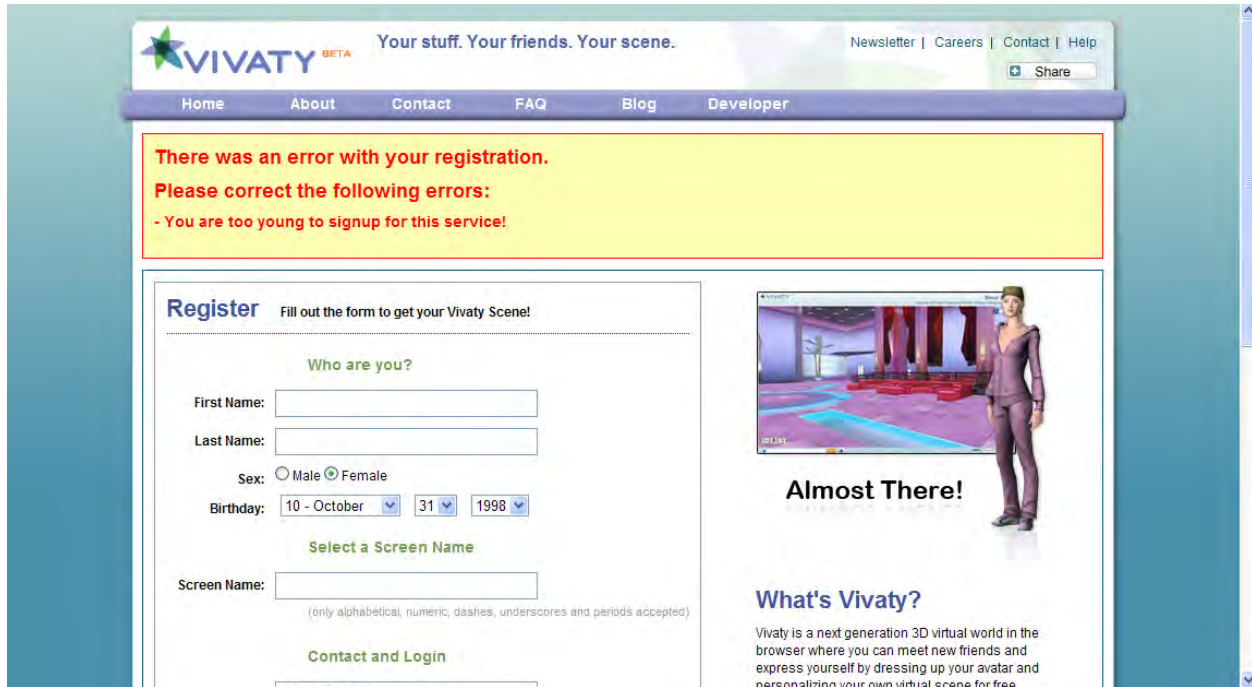


FIGURE 10: GAIA'S ERROR MESSAGE TO UNDERAGE REGISTRANTS

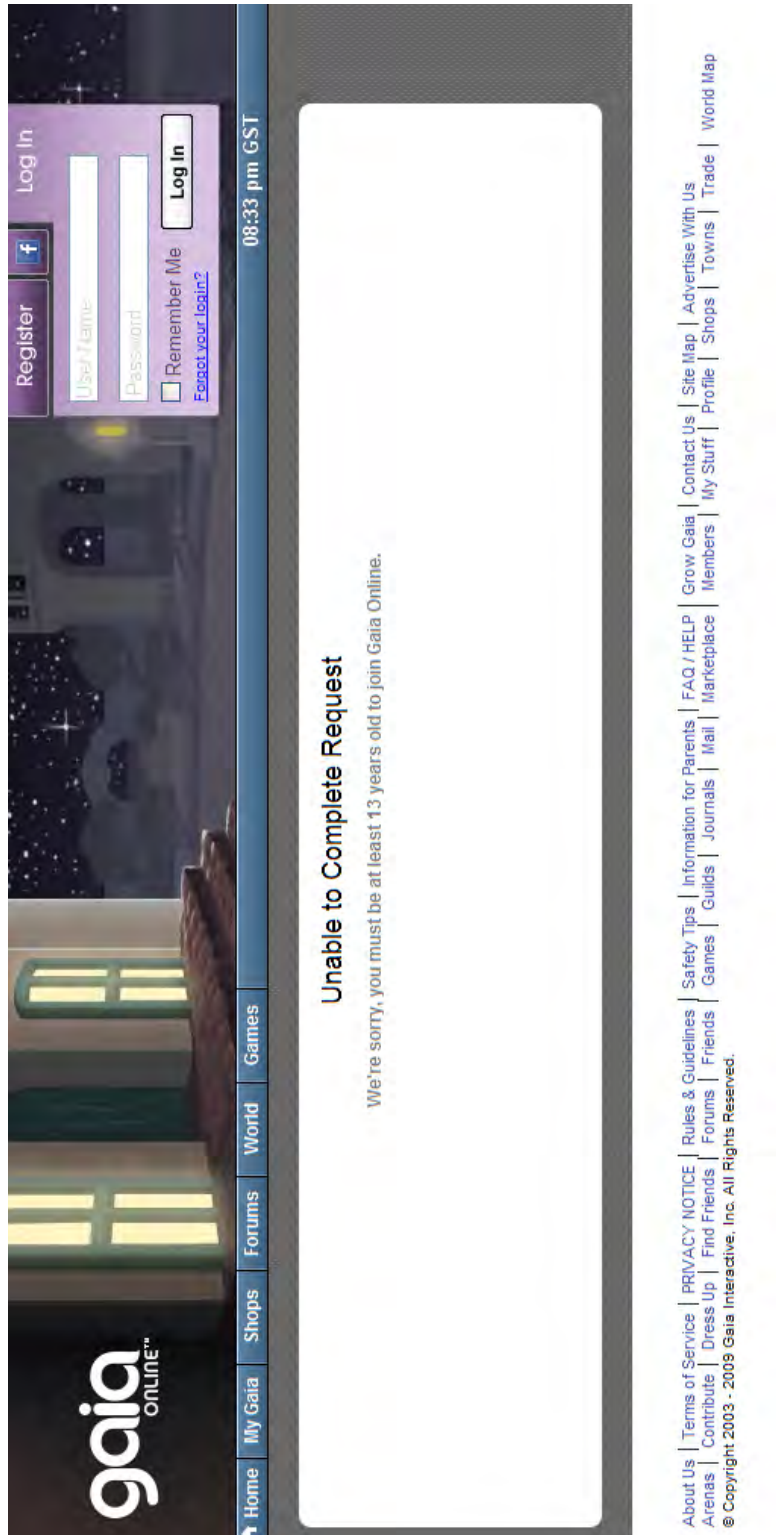
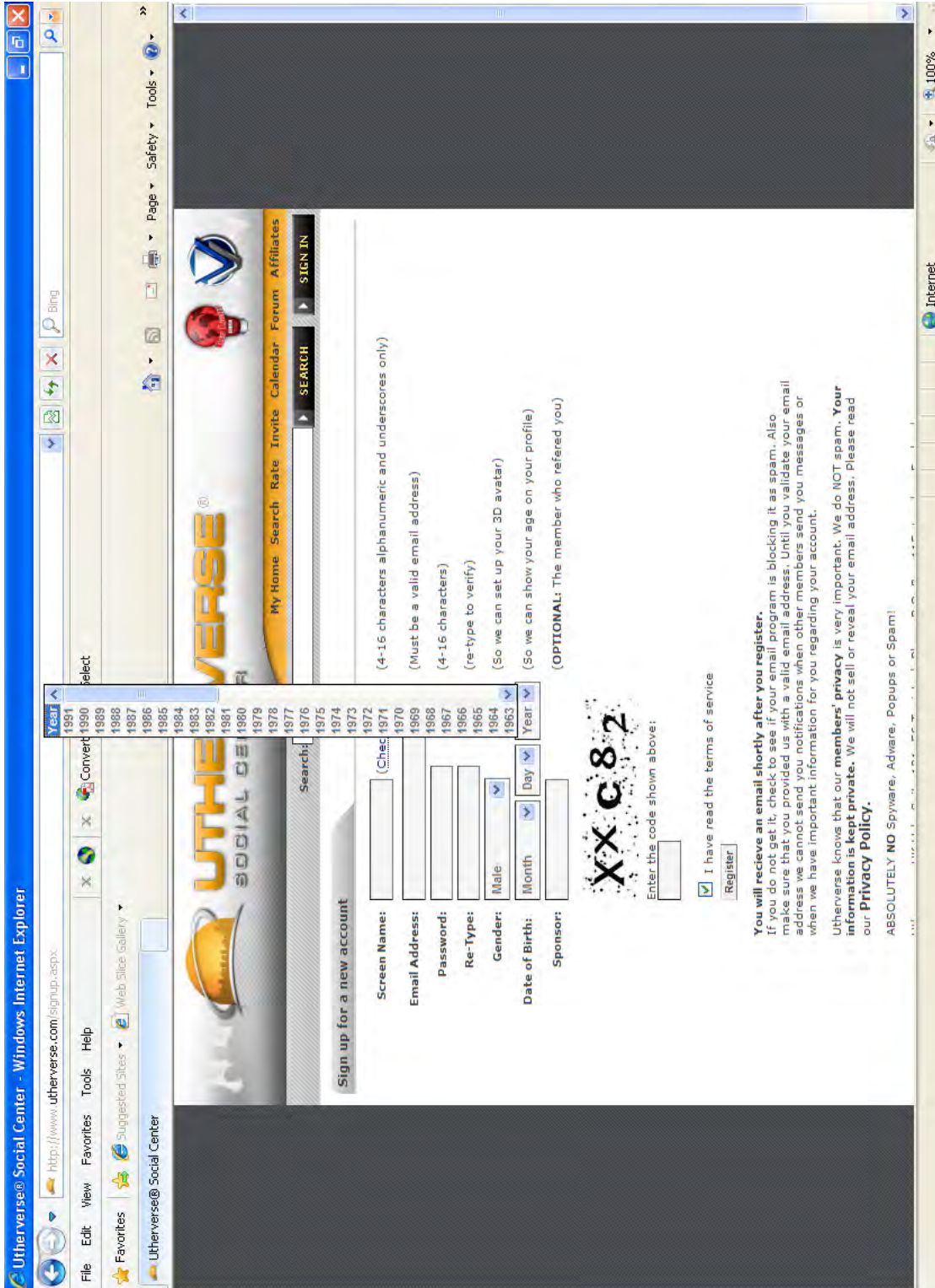


FIGURE 11: RED LIGHT CENTER'S NEW ACCOUNT REGISTRATION





FEDERAL TRADE COMMISSION

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