Internet Safety Technical Task Force Technology Submission

Kelly Maloney

ABSTRACT

The Double Secure Entry Age Verification Solution model offered by Red Star hs, a Washington State corporation, provides a robust and flexible approach to delivering a safe online experience to minors by leveraging trusted sources such as our Educational System (ES), and the resources of Social Networking Sites (SNS). By utilizing the ES' validated age information for students, SNS can offer "parentally opted-in" students the ability to create Profiles which are flagged and restricted to appropriate areas of the SNS. This is done through sources that have undergone a vetting process and have connected from pre-defined and secure sources. Once created, these age-differentiated, minor-designated profiles can be accessed from any location. The SNS further employs a variety of safety and security features to protect minors. See redstarhs.com for more information on additional options, such as, utilizing Microsoft's LiveID as a single UN/PW source for all SNSs.

KEYWORDS

- **Double secure entry (or) Double secure log-in—**the requirement for youth to only be able to create a SNS UN/PW through an age-validated, secure site
- **Multi-layered security features—**multiple safety and security features or measures to keep minors safe
- **Delivery methods—**the various methods that can be utilized in order to validate minors' ages (usually an entity associated with education or youth programs)
- **SNS—**Social Networking Sites
- **Walk Aways—**a logged in user who walks away from the computer
- **White-List—**A list that contains entities or addresses that have been preapproved and are trusted
- **VPN—**Virtual Private Network, a secure tunnel between SNS and age-verification entities

FUNCTIONAL GOALS

X Limit harmful contact between adults and minors
X Limit harmful contact between minors
☐ Limit/prevent minors from accessing inappropriate content on the Internet
X Limit/prevent minors from creating inappropriate content on the Internet
X Limit the availability of illegal content on the Internet
☐ Prevent minors from accessing particular sites without parental consent
X Prevent harassment, unwanted solicitation, and bullying of minors on the Internet
X Other – Prevent identification theft of a minor

PROBLEM INTRODUCTION

This age verification solution creates a partnership between SNS and the institutions we trust our children to in the first place—the educational system (public, private and other, and youth programs), while utilizing existing technologies and being nimble to utilize new, safer technologies as they are introduced, creating new delivery methods to:

1) Limit harmful contact between adults and minors—
Parents opt-in, letting their children participate in the program. Minors create UN/PW specific to SNS through validating entity. One such method is double security log-in, in which minors log into their school's online grades account through the UN/PW given to them by schools. Once minor is in secure school site, they create a SNS UN/PW. The second set of UN/PW is age-validated code, allowing SNS to know which age level the minor should be in and when the minor becomes an adult so they are automatically deleted from the system. There are other scenarios that are easily adaptable for various systems. This limits/prevents adults from logging into the age-verified areas of the SNS. For a possible case in which an adult utilizes a computer that is already logged into the age-verified site--precautions include an automatic log-out if the profile of the minor is idle for a specified period of time. Also the adult has to enter the minor's UN/PW in order to access another minor's profile.

2) Limit harmful contact between minors, prevent harassment and forms of bullying, prevent ID theft—achieved through the use of static screens which cannot be copied. The only person who can change (paste, upload, copy, edit, delete) information on a profile is the owner of the profile. However, minor may have the option of giving permissions to certain friends to copy images.

3) Limit harmful contact between minors; limit/prevent minors from creating inappropriate content on the Internet, prevent harassment, unwanted solicitation, and bullying of minors—pre-screened adults (full background checks) monitor sites full time, kids self police, key words and phrases are automatically flagged for review or, in extreme cases, not allowed. Sites are divided into age groups to limit the ability of an older teen contacting a younger teen.

Inappropriate behavior is handled based on severity—some cases will result in warnings, others are blocked from using site, others may be investigated for criminal behaviors.

PROPOSED SOLUTION

See Diagram (1)

All Delivery Methods limit the ability of an adult to access the restricted areas of the SNS that are for minors only.

Delivery method 1) Through a pre-defined vetting process, an entity (such as a School) becomes a "trusted source" for UN/PW creation. Following the establishment of trust, a secure connection mechanism, in this case a "white list" of trusted sources (by IP address) is then established. The SNS flags all UN/PW created from this trusted source as minors, and restricts these to appropriate areas of the SNS.

Delivery method 2) Through a pre-defined vetting process, an entity (such as a School) becomes a "trusted source" for UN/PW creation. Following the establishment of trust, a secure connection mechanism, in this case a VPN is then established. The SNS flags all UN/PW created from this trusted source as minors, and restricts these to appropriate areas of the SNS.

Delivery method 3) Collaborate with educational system and grades online entity where minors log into their grades online accounts with passwords provided to them by educational system. While logged into grades online account, they create SNS UN/PW.

In all delivery method cases, UN/PW is coded depending on minor's DOB, month and year of birth, student ID, or other non-confidential information that doesn't reveal the minor's identity. This code becomes "dash code" after minor's self-selected user name. (ex. Minor born October 1993 self selects UN "tiger." Full UN is then "tiger-1093." This allows system to know which age level the minor should be routed to and when to reroute the minor to the next older age level and/or out of the system when the minor turns 20 (or graduates or leaves the educational system).

When minors log into restricted areas of SNS they are routed to further restricted areas broken down by age categories. This limits the ability of an older minor contacting a younger minor.

When a logged in minor wants to access the profile of a friend, they have to re-enter their user name and password. This limits the ability of adults from making contact with another minor should the adult take advantage of access on a computer where a minor is already logged in and has walked away from the computer.

When a profile is idle for a specified amount of time, an automatic time-out occurs, resulting in automatic log out. The minor has to log back in to get back to her profile. This limits the ability of adults from making contact with another minor should the adult take advantage of access on a computer where a minor is already logged in and has walked away from the computer.

Images and content will be static to prevent someone from copying them for use in ID theft or cyberbullying. Users will have the option of allowing specified friends to use the copy functionality.

Inappropriate words, terms and phrases will be identified constantly and when a user utilizes them, his account will be flagged and/or the content in question will be automatically deleted, a further administrative review will take place, and the user will be warned and/or blocked depending on the level of the violation.

Technical Attributes

Technical attributes include the double secure entry in which minors log into one secure web site to create a second set of log ins. This second set of log in information is coded based on date of birth. In some cases, students may be able to bypass the first log in if they are at a school entity that has validated their ages and the entity has provided secure, static IP addresses to the SNS, or in a similar situation using a VPN. Then the student creates the age-coded log in information through the secure, static IP address or VPN, directly in the SNS's secure log in area. After log in, technical attributes include automatic time out, additional log in requirements for progressing to other profiles, coded identification of words and terms, and non-copy-able images and content.

Use Cases

The user's experience should be very similar to what it is currently on SNSs. The differences being how/where they acquire their UN/PW, being routed to age-appropriate areas of the site, having 24/7 administrative oversight, having to re-log in if they walk away from their computer, having to re-enter their UN/PW to go to a friend's profile, and having to allow a friend to copy images and content.

What Solution Solves/What it Doesn't Solve

This process-oriented, technical solution limits or prevents harmful contact between adults and minors; harmful contact between minors; minors from creating inappropriate content on the Internet; the availability of illegal content on the Internet; harassment, unwanted solicitation, and bullying of minors on the Internet; and identification theft of a minor. It does not limit minors from accessing inappropriate sites or inappropriate content on the Internet accessed outside participating SNS.

Strengths and Weaknesses

Strengths: low-cost implementation, collaborative solution that allows for parental opt-in and multi-layers of security features. Easy industry adoption and standardization. Provides several delivery methods and the ability to customize to meet the needs of the delivery method. Adoption rate by key audiences likely to be high when

offered through educational system. Parents will appreciate the security features. Non-scientific surveys show 100 percent of minor respondents and 100 percent of parental respondents welcome a safer, more secure alternative to current SNSs. 85% of these same parents say civil immunity for the ES is okay and a higher degree of oversight is okay. Lawmakers in Washington State are drafting legislation to give civil immunity to ES. This could be done on a federal level, as well.

Weaknesses: Liability issues for the ES and some parents and minors may feel there is too much oversight.

Implementation Requirements
Minimal since it is mostly process oriented. Some software and user training may be necessary for the coding of the birthdates; the oversight; the technical aspects of accepting the static IP addresses; setting up the secure, age-differentiated sections of the site; the static image and content controls; the word and term identifiers; and the time out functionality.

Technical Standards for Implementation
For static IP delivery method, the technical standard is Internet Protocol, which rests with the SNSs. The "dash-code" identifier rests with the SNSs.
For VPN delivery method, the technical standard is Virtual Private Network, which rests with the SNSs. The "dash-code" identifier rests with the SNSs.
For the double secure entry through entity or grades online secure web site, the technical standard is what the partnered grades online site uses and rests at the entity at which the UN/PW is created. In this case, the "dash code" identifier is a part of the UN/PW provider's system.

Use of Law and Policy
This can be done without implementing new policies or laws. However, it will have a higher success rate if the ES is granted civil immunity so they can collaborate with pre-screened, secure sites. (Assumption is that there will be a standard and sites that institute that standard are deemed secure.)

Viability in US and Internationally
This is possible to do anywhere there is basic technology. If kids are on SNSs, this solution can be applied.

Effectiveness to Date
This solution has not been put into operation. The concept has been in development since 2004. During this time, the principal has met with Washington State's Office of the Superintendent of Public Instruction, school districts and attorneys to overcome obstacles, and is working with the Washington State legislature to create a bill that will be presented to both the Senate and the House to provide civil immunity for the educational system in the case where all required diligence is done in advance.

EXPERTISE
Kelly Maloney, founder/Red Star hs-owner/kmConsulting, has 16 years experience bringing new products and services to market utilizing her expertise in branding, PR, media relations, advertising, search engine optimization and more.

WA Senator Tracey Eide and Rep. Skip Priest co-sponsoring a bill for the '08-'09 Legislative Session to provide civil immunity for ESs that work with SNS.

Robert Martin, sole proprietor/TronixSoft. 20 yrs in technology; technology consultant; former senior network administrator responsible for securing a multi-organization network; responsible for policy creation/enforcement; firewall mgmt; server, desktop, remote access security.

COMPANY OVERVIEW
Red Star hs is a for-profit corporation doing business in WA State since '05. The proposed age verification solution and the term "double secure entry" are patented under the corporation Red Star hs. Founder, Kelly Maloney, provides all capital for all aspects of the organization. There are currently no revenues. Customer base is limited to an agreement between Red Star hs and the Boys & Girls Clubs of Federal Way and Auburn, and the teen center EX3, in the case it is chosen as a delivery method. This solution is easily scalable so growth can occur relatively quickly.

Key Team Members (in addition to those listed above:

Tom Murphy, super. of Federal Way Public Schools; Tim Kilgallon, CEO FreeClear; Dan Bogart, VP Sterling Savings Bank; Joe Erickson/Kelli Arntzen, MD, co-founders Westside Dermatology; Brianne Kampbell, attorney Brown Yando & Kampbell, PLLC; Mike Dziak, owner EVI Productions

BUSINESS MODEL OVERVIEW
Direct and indirect costs to SNS include legal use of the patented process(es). Non profits, start-up sites and services, and other organizations not able to afford full price for the legal use of patented process could possibly take advantage of a reduced fee structure.

MORE INFORMATION
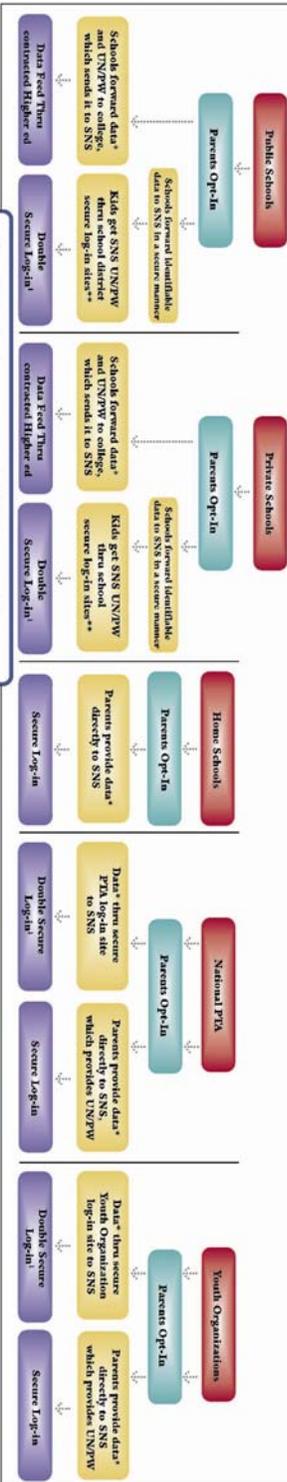www.redstarhs.com -- Video, Flow Charts, option details

CONTACT INFORMATION
Kelly Maloney
admin@redstarhs.com
253.632.0381
409 SW 348th Court, Federal Way, WA 98023

CERTIFICATION
 "I certify that I have read and agree to the terms of the Internet Safety Technical Task Force Intellectual Property Policy."
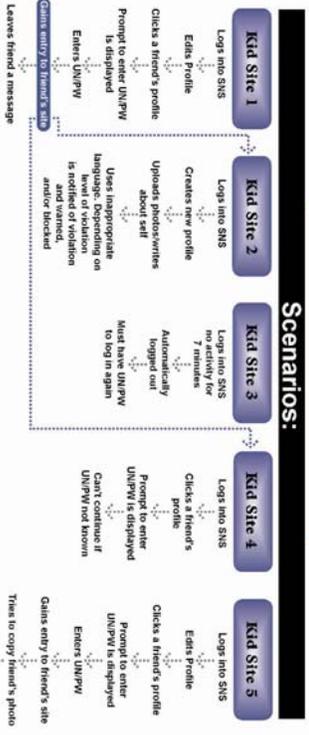
Delivery Models

Join the Revolution

RS
SNS

Public Schools
- Parents Opt-in
  - Schools forward identifiable data to SNS in a secure manner
  - Kids get SNS UN/PW thru school district secure log-in sites**
  - Double Secure Log-in[1]
- Data Feed Thru contracted Higher ed
  - Schools forward data[1] and UN/PW to college, which sends it to SNS

Private Schools
- Parents Opt-in
  - Schools forward identifiable data to SNS in a secure manner
  - Kids get SNS UN/PW thru school secure log-in sites**
  - Double Secure Log-in[1]
- Data Feed Thru contracted Higher ed
  - Schools forward data[1] and UN/PW to college, which sends it to SNS

Home Schools
- Parents Opt-in
  - Parents provide data[1] directly to SNS
  - Secure Log-in[1]

National PTA
- Parents Opt-in
  - Parents provide data[1] directly to SNS, which provides UN/PW
  - Secure Log-in
  - Data[1] then secure PTA log-in site to SNS
  - Double Secure Log-in[1]

Youth Organizations
- Parents Opt-in
  - Parents provide data[1] directly to SNS which provides UN/PW
  - Secure Log-in
  - Data[1] then secure Youth Organization log-in site to SNS
  - Double Secure Log-in[1]

Youth logs into age-appropriate SNS secure site
Multi-layered security features:
- Double security entry[1]
- Pre-screened adult oversight—24/7 (adults have full background checks)
- Unallowed content electronically monitored and flagged
- Static screens to prevent identity theft and cyber bullying (can't copy and paste from another kid's site)
- Self-policing
- Police/FBI have access to sites with search warrant for unlawful activity
- "Public-Private" Site = private, secure site that has oversight

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11-13 year olds[2]

14-15 year olds[3]

16-19 year olds[4]

Youth sets up/edits personal page(s)

MUST submit UN/PW again to access another kid's site every time they log in.

Scenarios:

Kid Site 1
- Logs into SNS
- Edits Profile
- Clicks a friend's profile
- Prompt to enter UN/PW is displayed
- Enters UN/PW
- Gains entry to friend's site
- Leaves friend a message

Kid Site 2
- Logs into SNS
- Creates new profile
- Uploads photos/writes about self
- Uses inappropriate language. Depending on level of violation is notified of violation and warned, and/or blocked

Kid Site 3
- Logs into SNS
- no activity for 7 minutes
- Automatically logged out
- Must have UN/PW to log in again

Kid Site 4
- Logs into SNS
- Clicks a friend's profile
- Prompt to enter UN/PW is displayed
- Can't continue if UN/PW not known

Kid Site 5
- Logs into SNS
- Edits Profile
- Clicks a friend's profile
- Prompt to enter UN/PW is displayed
- Enters UN/PW
- Gains entry to friend's site
- Tries to copy friend's photo
- Access to do this is denied electronically
- Warning sent to administrators and to user

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*Data name, DOB, SNS UN/PW, school ID number or any other identifiable data deemed secure.

**Can be through school district's (or by individual school or through the state's educational division) own system or through contracted entity, such as (but not limited to) online grades company, web host, online lunch money company, etc.

1. The terms "Double Security Entry" and "Double Secure Log-in" are proprietary terms belonging to Red Star Inc.

2. PTA (at local, state or national level), or SNS on behalf of PTA, sets up encrypted web pages for secure identification verification.

3. Suggested age divisions. Can be changed as warranted.

All information contained herein is proprietary and confidential to Red Star Inc.
SNS = Social Networking Site

Diagram 1