INTERNET SERVICES
HELPING MISSING CHILDREN
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Dear parents, caregivers, and educators,

Situations in which children go missing, even for a short time, happen quite often and cause serious stress both for the child and for their parents. Usually the missing child immediately faces two problems: how to make sense of where they are and how to get information about their location to those who are searching for them. In the past, this was more difficult as there were few available tools, but now in the age of digital technologies, especially mobile technologies, there are tools that can help solve these problems. Some of these tools are for public use, while others like search and alert functions were developed specifically to help locate missing children. With that in mind, our task here is to share information on how Internet resources can help lost children to find their way home, and how the adults who are searching for them can use digital tools to help recover the lost child quickly.

Today, children start using the Internet at a very early age, often around the time the child begins school. There is substantial research showing that young children are well aware of computer mobile tools and how to use them. At the same time, many children as young as elementary school-age already have e-readers, smartphones, and tablets that can connect to the Internet and utilize online apps. But children are not well equipped to handle some of the situations/risks that they may face online. We will provide here a list of tips for using the Internet in various situations when children may be lost. We hope that this information can help to some extent reduce the number of missing children cases by expediting the recovery of missing children.

NeDopusti! – Russian National Centre for Missing and Exploited Children; Russian Safer Internet Centre
Today a mobile phone is no longer just an expensive toy for a child – it has become a necessity – a must for child safety. It is often necessary more for the parents even than for the child. Almost all parents treat mobile phones for their child as a means for two-way communication in case of an emergency, allowing parents to contact their child any place at any time. Good mobile network coverage helps children stay connected even in more rural areas.

Mobile phones have evolved from a simple calling device to a mini-computer that also has the functionality of a telephone. Smartphones were very expensive not that long ago, but in recent years the price for these devices has significantly decreased. The average smartphone is equipped with many tools that provide functions previously performed by a variety of devices, for example, a video camera, an audio and videoplayer, small computer with Internet access, and even a GPS navigator with mapping functions. The diverse uses for such a universal device may be helpful in many different situations; the presence of a smartphone in a child’s pocket has become essential for their safety.
SMARTPHONES

Smartphones for children should be technically reliable and must be able to run all necessary functions for child safety. It is the responsibility of the parents to equip the child’s phone with applications that will help ensure their safety.

When choosing a smartphone for a child, consider the following recommendations:

• If possible, it is better not to purchase smartphones that are locked under just one mobile operator. A child might get into a situation when they will need to put another SD-card into the phone, from a different operator, or for example, you might decide to switch from one mobile provider to another. If this is the case, it may be necessary to remove the custom lock from the phone; the phone may not work properly afterwards or it may necessary to purchase an entirely new phone.

• In cold climates, smartphones with touch-screens have sensor buttons that react to the user’s touch. These sensors may work improperly in very cold weather (i.e., below 32 Fahrenheit) and may not detect the fingerprint. As a result, calls may be missed or it may be difficult to make calls. In regions with cold winters, it is better to choose a telephone that has basic functions like answering and ending a call, opening the menu, etc. duplicated with physical buttons. Some people choose smartphones with full mini-keyboards like a Blackberry, but this is a matter of personal preference and cost.

• A number of applications, especially mapping services, are often pre-installed on the smartphone, but may require a tremendous amount of memory. To avoid unexpected memory shortages, it is important to consider buying a model with greater memory storage or a model that allows a memory card to be added. Of course, it is also important that the phone has sufficient RAM memory to quickly run applications.
SMARTPHONES

- Smartphones often have a short battery life when apps are being used. In order for a child to be connected at all times, consider buying a more powerful battery for your device. An AC charger can be carried if there is an outlet nearby, or an additional battery or mobile charger can be purchased (but it should be charged in advance).

A smartphone can be especially helpful when the regular mobile connection (3G/4G) becomes unavailable unexpectedly – for example, if a child has a prepaid account and has run out of funds. Many computer applications do not rely on a mobile network connection; they work in regular computer mode. Many applications function more effectively with a strong WiFi connection, which can be found for free in many malls, cafes, fast food restaurants, railway stations, and even the metro. Mapping applications connect with GPS satellites and mobile or WiFi connection helps these applications to locate the device more quickly, but WiFi is not vitally needed to operate these apps. Smartphones allow for many forms of communication, which are available even when regular mobile networks are not. It should be noted that in some countries, the use of free public WiFi might be subject to extra verification procedures – a password may be needed that will be sent via text. But since text messages can usually be received even with a zero balance on the mobile account, it is unlikely to become a problem to access free WiFi from a smartphone.

Of course, the easiest way for a lost child to be recovered is by asking an adult to call their parents. But, in many situations, there may not be an adult nearby who the child trusts. Or the adult may refuse to help as they may suspect fraud. A child may be too shy to ask for help, or on the other hand, they might think themselves mature enough to try to solve the problem on their own. It is also possible that an adult may be willing to help, but simply cannot provide enough information to the parents looking for their child and may need to resort to the Internet and mobile apps. Using Internet apps to recover a missing child can be useful in different situations.
Digital maps are likely the first digital tool we think about when we talk about recovering missing children. The current utility of digital map services far exceeds that of paper maps – they can locate a mobile device and its owner on the map, create routes to familiar places, and provide information about what businesses are located in the vicinity. All of these functions can be very useful if a child gets lost.

Today, there are many digital map services online. Some of them are provided by search engines, and some are through specialized web or digital services. Digital map services often combine the functions of paper maps, GPS navigators, and route planners. Some mapping services incorporate additional functions from the search engine and can literally speak.

Many digital maps can be pre-installed on smartphones or tablets. Digital maps, however, have the disadvantage of being quite large files so downloading the map may be costly and slow. When maps are downloaded in advance and stored in the device memory, they can be activated quickly and can be used without an Internet connection. Using maps on a smartphone requires significant memory or an additional SD-card.
If a child is lost and has a smartphone with them, the digital mapping capability will be helpful. It is first recommended that the child open the map application and try to determine their location. The child may not understand exactly where they are so the positioning function will be needed.

In this case, the child should turn on the GPS function – it will begin searching for satellites. Depending on the device and type of service, it may take up to several minutes, so it is better to pre-install the digital map service so that it can interact with the satellites faster when needed.

Digital maps are quite detailed and usually have the same information as paper maps like names of streets, addresses of buildings and in some cases, locations of public transportation like train stations and metro stops. The primary difference is the ability to create a route from point A to point B. This function may even work without an Internet connection when maps are downloaded and the application is installed in advance. The route will appear directly on the map and additionally may have turn-by-turn directions in text. Route building functions are available for driving, walking, and even for public transportation like buses. When connected to GPS or mobile Internet, the route planner will guide the child, informing them in real-time where to go. A built-in digital compass may also be useful as it pulls data from satellites and can update the route as the child moves.
Frequently, online maps are equipped with additional information such as the location of the nearest police station or hospital. The map may also be able to show businesses that are located in a particular area and their hours of operation. Wiki-maps also provide useful features such as photos of streets, intersections, buildings, and other surroundings.

A missing child can regain their bearings not only by searching for the address of a particular building, but also the appearance of the building. And as some maps also provide information about public transportation routes, a missing child of middle-school age, may be able to find a bus stop and get home on their own if they know what route to take and where to get off of the bus. Websites for commuter buses and trains provide timetables for trips and route maps.
Most Internet users begin surfing the Internet on a search engine (like Google or Yahoo!). A search engine is used to find information online. So how might this be helpful for a missing child?

The Internet provides an excellent resource for a child to find detailed, expert recommendations about how to behave in different situations, such as first aid advice, tips to protect yourself from the cold or heat, or a description of how to start a fire (especially relevant if the child is lost in the woods). All of this information can be found by simply typing a query into the search window. Having access to this vital information can help a child stay calm in challenging situations and it may even be the key to survival.

The Internet is also a directory of information. Search engines may help a child find information about nearby organizations, photos of what they look like, the hours of operation, and available services. For example, a
child could find out if first aid services are available in the mall, or if WiFi is available in a nearby coffee shop. Public transportation schedules can be found online and some search engines even provide special apps that provide fare information and routes.

Search engines can also be used to find websites for organizations who work with missing children and their families. Missing children can actively provide information about themselves by contacting the organization to help their loved ones find them. It is recommended that parents favorite these links on the smartphone's browser for easy access.

COMMUNICATION SERVICES

There are numerous communication services on the Internet from chatrooms and instant messengers to social networks. These services can undoubtedly be used by a missing child as an alternative means of communication.

Studies show that when a missing child has no mobile connection, but has Internet access, they will try first to understand their situation via web-based communication services. Currently, there are many options available for the child.
COMMUNICATION SERVICES

It is also possible to send a text message to a mobile phone from some mobile providers' websites. Most mobile providers in the U.S. have made it easier in recent years to send a text message to a wireless device from an email address and to send a text message to an email address from a wireless device. For example, to send a text message to an AT&T mobile device from an email account, simply open the email app, compose a message, and send it to the recipient's 10-digit wireless number followed by @txt.att.net (e.g., 5551234567@txt.att.net). The same process is true for other companies – for a Verizon mobile device, send the message via email to the recipient’s 10-digit mobile number followed by @vtext.com; and for a Sprint account the number followed by @messaging.sprintpcs.com.

In order to send an email message from your text screen, simply send a message to the regular email address and the incoming email will show your mobile (as described above) as the sender.

If a child knows that their parents regularly use the Internet, they may try to reach them directly via Internet communication tools; for example, via Skype in text or video mode. There are also numerous other messaging apps like WhatsApp, Facebook Messenger, and Viber that provide similar services.

Social networks have united the functions of several predecessors of Internet communications services like personal websites, chats, forums, blogs, video-hosting services, and gaming portals. Social networks can be useful for missing children as they provide the child with several opportunities to provide or receive information at once. The child may first visit the pages of parents, siblings, or other relatives to let them know that they are lost.
Communication on social networks is two-way, allowing the child to have real-time conversations with the family and friends searching for them. If relatives are unavailable, the child may visit the pages of friends (preferably real-world friends, not virtual friends) and let them know they need help. In contrast to forums and blogs, social networks are widely used so the probability that a message will be seen and receive a reaction is much higher.

It is possible for a child to upload photos of their surroundings to help parents find them. If the social media page is private (so that only friends can see posts) a child can post a message like "I am lost. I am located here." along with a photo of their location so that friends and family will see the post and be able to find them. If, however, the social media page is public rather than private, this kind of a post could pose a danger to the child as strangers will also be able to see that the child is lost and alone and may attempt to harm the child.

A missing child can also reach out to organizations that work on missing children's issues through their organizations' websites or specialized forums. In the United States, the primary missing children's organization is the National Center for Missing & Exploited Children (NCMEC). NCMEC receives reports of and tips about missing children. There are also numerous organizations at the state-level working to help find missing children.
SPECIALIZED REFERENCE WEBSITES AND SERVICES

There are other services that can help a missing child re-orient themselves such as search engines like Yahoo! and Google. These sites can help the child find information on schedules and routes of public transportation through special apps by directing them to websites for related businesses (bus and train companies, local transportation companies, etc.). These services can help create a route from point A to point B by metro, bus, car, or on foot. They may also include information for private companies like Lyft and Uber, in addition to public transportation companies.

The main disadvantage of such "universal" services is that they may not contain information about small or remote towns or new areas/developments and thus may not be helpful for a child who is lost there. There may also be special websites for a particular city, town or region. The child’s parents may find such sites useful to locate hospitals, police stations, and other public places like shopping malls.

There are also special reference sites like Ask.com where questions can be posted and replies received. These services are not limited to a specific topic, so users can ask questions on a variety of topics like how to protect yourself from freezing in winter. Of course, it is difficult to guarantee the accuracy of responses as they are often provided by public users and it can take some time to receive responses on these sites. So while the sites are available and may be useful in some cases, it is best for a child to utilize a service that provides a more immediate response.
There are many types of resources and hundreds of millions of websites. We tried here to gather the most relevant advance about the types of digital resources and services that might be helpful for a missing child. We aimed to show both the advantages and disadvantages of these services, and to advise how to best use them.

It is important to prepare children for an emergency in advance. Children must be equipped with the appropriate knowledge and relevant information and should know what to do in specific situations, where to go, and how to act. Simply having a smartphone with Internet access is not enough to keep children safer, but they should know how a smartphone may help and what to do if there is no Internet access.

Parents should have open conversations with their children and discuss different scenarios, practicing so children will know what to do if needed. A child’s smartphone should also be prepared in advance. Parents should have an adequate understanding of useful Internet resources and how they work. The URLs of the websites that parents recommend their children use in case of an emergency should be saved in the Favorites list of the browser on the child's phone. Parents should install necessary apps on the child's smartphone, as well as the parents' smartphones – from digital maps to a flashlight – and explain to the child how to use these tools. The smartphone can be an indispensable resource for your child in case a problem arises.

Good luck! Don't get lost!