

# State of Online Safety Report

*2011 Edition*



Family  
Online Safety  
Institute





# Letter from Stephen Balkam, CEO of the Family Online Safety Institute



It gives me great pleasure to present the State of Online Safety Report to coincide with FOSI's fifth annual conference and exhibition.

This report is based upon the findings from FOSI's Global Resource and Information Directory (GRID). It is a unique online portal which provides users with extensive information on education, regulation, safety initiatives and usage from over 190 countries, 50 US states, 10 Canadian provinces and 6 Australian states.

We are very proud of the depth of GRID, its aggregation of content and the fact that much of the work that it showcases has never been translated into English before.

This is vital information for policy makers looking for good examples of reasonable oversight measures, companies wanting information on best practice and new markets, non-profits seeking innovative ideas and researchers seeking baseline stats. In short, everyone involved in the complex and ever-changing world of online safety.

In effect, you have GRID in your hands and relevant and timely data at your fingertips. All this and more can also be found online and if you haven't already done so, register for free access to GRID at [www.fosigrid.org](http://www.fosigrid.org)

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# Executive Summary

The Internet has evolved far beyond its original purpose<sup>1</sup> and is now accessible in nearly every country on the planet by adults and children alike.<sup>2</sup> Three key milestones provide an important indicator of the extensive growth of the Internet:

- 2 billion Internet subscribers<sup>3</sup>
- 6 billion mobile connections<sup>4</sup>
- 800 million active Facebook users<sup>5</sup>

Underlying these figures are other important trends. For example, more than half of new mobile phone subscribers in 2011 are from the Asia-Pacific region,<sup>6</sup> reflecting a shift in growth markets. The spread of technology and the high rate of usage makes this the perfect moment in the development of digital technology to conduct a global evaluation of the state of online safety.

New technologies bring with them new challenges and as more children access these technologies, their potential exposure to risk increases.<sup>7</sup> This can be mitigated through education both at school and at home: teaching children how to access the numerous benefits of online activities, without encountering the more negative aspects such as cyberbullying. The lessons learned in the developed world can be transferred to the developing one: highlighting the need to educate parents and teachers as to how best to keep their children safe.

One of the key ways to combat risk is through a multi-stakeholder approach to online safety. The Family Online Safety Institute (FOSI) has created an essential framework which outlines key players who must accept responsibility for children's online safety: government, law enforcement, industry, teachers, parents and the children themselves.<sup>8</sup>

The findings in this report are based on FOSI's work to build the Global Resource and Information Directory (GRID). Researchers looked at three key themes: online safety, access, and Information and Communication Technology (ICT) education. Countries were analyzed, taking into account their individual socio-economic and political situations.

## Global Themes

- Research relating to online safety has primarily been conducted in North America, Europe, New Zealand and Australia. Regional research looks at children's usage patterns and means of access. The results of these studies indicate similarities in the way the Internet is integrated into children's lives and their social circles across the world.
- ICT education is a key element in improving online safety while also improving a country's economic competitiveness. There is also a clear development path for ICT education wherein governments create ICT curricula, then industry and non-profit organizations assist with providing resources and teacher training. A collaborative approach is crucial to the creation of successful ICT programs in developing countries.
- The focus of a country's online safety goals is dependent upon its stage of digital development. In the earliest stages, countries look at issues of cybercrime. As digital development progresses, users become savvier and begin to explore online resources: increasing the potential exposure of children to content and contact risks.
- A wide variety of organizations are fundamental to the promotion of online safety and prevention of harm to children. At the country level, government-sponsored bodies and non-profits build awareness and offer reporting mechanisms for safety issues. There are also a number of global organizations including standards and law enforcement bodies that provide oversight. Corporations play an essential part in providing resources and support often through their own initiatives to increase Internet access and education.



## Regional Themes

- North and South America are deeply divided in terms of digital engagement. The U.S. has been a major pioneer in both Internet technologies and online safety. Canada focuses a great deal on education and user empowerment. Internet penetration is very high in Canada with fully connected schools and public libraries. The U.S. requires schools to create online safety plans and place filtering software on computers for children's use.
- Latin America and the Caribbean, however, are struggling with major economic and political barriers which have slowed digital development. Non-profit organizations and corporations have been very active in helping to provide resources to improve ICT education. In online safety terms there are still pockets of best practice, but as a whole, the region is just beginning to deal with these issues. Cybercrime and exploitation of children, particularly relating to sexual abuse images are the most prominent issues.
- Europe is one of the most digitally advanced regions in the world, but also has large variation in the digital development of countries. The European Union is a major influence on the formation of online safety programs. Children are taught about digital citizenship and countries in this geographic region use a number of innovative campaigns to build awareness. This region is unique in that a number of the countries promote Internet access as a basic right. Europe is also home to one of the most comprehensive regional studies of children's online usage: the EU Kids Online program.<sup>9</sup>
- During 2011, the Middle East and North Africa experienced unprecedented political upheaval and regime change. Mobile technology and social media played a prominent part in protests particularly in Tunisia and Egypt. On a broader demographic level, with a significant proportion of the Arab speaking world under the age of 25 year of age, basic literacy and limited Internet access are a widespread problem.<sup>10</sup> However, some progressive countries are beginning to deal with the challenges of online safety, but the majority of the region has not yet tackled these issues beyond the installation of mandatory filtering systems at an ISP level to prevent access to pornography in some countries.
- Oceania, like many of the more advanced regions, has variation in digital development. The larger countries, Australia and New Zealand, have placed significant focus on developing digital literacy, building online safety websites, promoting awareness campaigns and filtering content. Many of the smaller islands are working through difficulties providing basic education and Internet access. Non-profits have contributed a great deal to developments in education throughout this region.
- Africa is still in the early stages of its digital development, with a strong legislative focus on tackling the issues of cybercrime. Access poses a particular challenge across the region. Lack of electrical infrastructure in many rural areas has led to a great deal of innovation such as the use of satellites and solar technology. Industry and non-profits are major contributors to improving access and education.
- Asia is one of the most important regions for the future of online safety with high technology consumption and some of the most populous countries in the world. The most digitally developed countries in the area are facing the same online safety issues as Europe and North America, but are also tackling the more advanced issues of Internet and gaming addiction.<sup>11</sup> The region is also innovative in their awareness campaigns and efforts to build children's digital literacy. There are still a number of countries struggling with digital development but this region, like Africa, has developed some novel approaches to improving access.



## Key Recommendations

### Evaluate

- Future research needs to look at not only the risks associated with Internet access, but also the benefits and how Internet usage shapes children's development. Researchers need also to conduct more research in developing regions to better understand children's usage patterns and online behaviors. Research should include more information on parental digital literacy and its effect on children's usage. Re-evaluations of current educational curriculums should be conducted with a view to reflecting new 21st century learning and the creative power of new technology in the classroom.

### Innovate

- Online safety programs should be constructed with an awareness of the cultural context of countries; not a 'one size fits all' approach to safety. More creative ways must be found to drive forward Internet access in rural areas, with recognition that the barriers are different for each region. Stakeholders need to make greater use of technology to find solutions to the challenges of online safety. Social media and collaborative platforms like GRID can increase engagement, understanding and make better use of scarce global resources.

### Collaborate

- More countries should examine the existing best practice and should use those innovative strategies to build effective programs that raise children's online safety awareness from a young age. Collaboration is fundamental to delivering effective online safety initiatives. Effective digital citizenship relies on multi-sector collaboration in support of children's digital education and promotion of online safety issues. Governments should be encouraged to provide reasonable oversight and support of industry self-regulatory efforts. Non-profits should play a significant role in a multi-stakeholder approach to online safety and the promotion of digital citizenship.



# Introduction

The Internet has become a hugely significant technology in the first decade of the 21st century. Through computers, mobile devices, gaming consoles and Internet-enabled TV, the Internet has become pervasive and is accessible in nearly every country.<sup>12</sup> The way individuals consume media is shifting based on instantaneous access. Social media and virtual worlds encourage interaction and communication between peers, as well as blur the line between offline and online lives. However, for children and young people there are also risks such as the exposure to age-inappropriate content or instances of cyberbullying. While for most young people the Internet is a largely positive experience, teaching them safe and responsible use remains a priority.

There are more than 250 million active users currently accessing Facebook through their mobile devices. People that use Facebook on their mobile device are twice as active on Facebook as compared to non-mobile users.<sup>13</sup>

From a global perspective there is a wide spectrum of engagement with the Internet. Countries in the developed world have the highest number of Internet users, and correspondingly the highest number of Facebook users.<sup>14</sup> Developing countries are less advanced owing to financial, political and social barriers to access.<sup>15</sup> As people in developing countries access the Internet, they are exposed to the benefits and risks of Internet usage without the proper online safety resources such as web portals and educational campaigns which are accessible in other areas. Lack of digital literacy often restricts parental engagement with online safety as parents do not understand the technology their children are using. Additionally, it is accepted that a lack of literacy denies people access to modern technologies<sup>16</sup> and safety campaigns must therefore be targeted using non-print-based media to reach these individuals, such as television and radio.

This report looks at the measures being implemented by countries and regions to combat the risks associated with online usage. The remainder of this section will highlight specific online safety challenges, FOSI's key framework for the culture of responsibility, the importance of digital citizenship and the process of data selection used in this report. Section two of the report provides a global overview of the state of online safety in research, legislation and education. This section will also discuss the work undertaken globally by organizations and international governing bodies. Section three outlines the regional state of online safety and will analyze the efforts to mitigate risks in each region. This section will also highlight regional best practice and provide case studies of online safety initiatives in each region.

## Population Demographics<sup>17</sup>

- World Population: 6,928,198,253 (As of July 2011)
  - 0 – 14 years: 26.3% of population
- Literacy: 83.7% Population; 79.2% Female
  - 2/3 of illiterate adults are women

## Internet Users *(As of March 31, 2011)*<sup>18</sup>

- North America – 304,966,000, 66.1% Penetration
  - Central America – 7,833,400, 18.6% Penetration
  - The Caribbean – 11,660,570, 28.1% Penetration
  - South America – 162,779,880, 40.7% Penetration
  - Europe – 476,213,935, 58.3% Penetration
  - Middle East – 72,497,466, 33.5% Penetration
  - Oceania – 21,293,830, 60.1% Penetration
  - Africa – 118,848,060, 11.5% Penetration
  - Asia – 932,393,209, 24.0% Penetration
- Total worldwide: 2,110,764,630, 30.5% Penetration



### **Social Media Users: Facebook Users**

*(As of June 30, 2011)<sup>19</sup>*

- North America – 194,768,870, 42.2% Penetration
- Central America – 6,255,240, 14.9% Penetration
- The Caribbean – 5,903,520, 14.3% Penetration
- South America – 81,969,200, 20.5% Penetration
- Europe – 208,907,040, 25.6% Penetration
- Middle East – 16,125,180, 7.5% Penetration
- Oceania – 12,881,560, 36.4% Penetration
- Africa – 30,665,460, 3.0% Penetration
- Asia – 152,957,480, 3.9% Penetration

Total worldwide: 710,728,720 users,  
10.3% Penetration

### **Mobile Phone Usage:** *(As of Q2 – 2011; these figures include both contract and pre-paid connections)<sup>20</sup>*

- Central America – 41,648,442
- The Caribbean – 25,749,618
- South America – 433,833,842
- Europe – 1,010,984,988
- Middle East – 314,987,075
- Africa – 595,023,646
- Asia and Oceania – 2,810,913,919

*(As of Q4 – 2009; this figure includes both contract  
and pre-paid connections)<sup>21</sup>*

- North America – 391,537,977 (Canada, U.S.  
and Mexico)





# Online Challenges

The framework used in this report breaks risks into three categories which are the result of two seminal reports in the area of digital safety, namely *Safer Children in a Digital World: The Report of the Byron Review*<sup>22</sup> and *Risks and safety on the internet: The perspective of European children*.<sup>23</sup> It is important to note that a “risk” in the global state of online safety report is defined as the potential for future harm. Risks discussed in this report are those involving online content, those relating to contact with other individuals online and those involving the ways children conduct themselves online.<sup>24</sup>

## Content Risks

Risks in this category are those children face as recipients of online content. Content risks can cause children distress,<sup>25</sup> although long-term effects on their wellbeing are unclear at the present time. Research to date indicates that further study in this area is warranted.<sup>26</sup> These risks include exposure to inappropriate content like pornography, violence, or hate speech. Harmful content also extends to websites that offer guidance on self-harm, suicide or eating disorders. Data protection risks are those involving inappropriate sharing of a child’s information which could potentially have an impact on privacy, like identity theft,<sup>27</sup> and on future educational or employment opportunities. There is also the potential for negative interactions to spill into real life when personal contact details are made available online.<sup>28</sup>

Children may share information intentionally through filesharing or using location based software, but there are also threats to security from people illegally accessing information using phishing, trojans, or even viruses. Filesharing of copyrighted materials also increasingly carries the risk of fines or prosecution; and some gaming manufactures are employing law firms to pursue copyright violators.<sup>29</sup> There are a series of commercial risks where advertising or content is specifically tailored to children in order to shape their consumption patterns. Advertising is also contributing to media attention over the risk of sexualization of children by encouraging age-inappropriate consumption patterns.

There are a number of tools that can be used to limit content risks including Internet security measures such as firewalls, rating systems, and parental control software. The installation of filtering software is increasingly used on computers accessible at public locations. As access increases, particularly on mobile technology, it is more complicated to protect against content risks. However, parental supervision is key. Taken in conjunction with Internet safety as a component of their educational curriculum, school age children in particular can be helped to develop the computer literacy and resilience that will serve them well in their teenage years and beyond.

## Contact Risks

These are risks children face as participants where their usage may expose them to negative or sometimes dangerous situations. In general, contact has increased as people feel more comfortable engaging with others and are driven to build online communities through Internet forums and blogs which drive awareness of specific issues. The many routes of access allow individuals to stay plugged into the Internet at all times and instantly engage with a range of individuals and content. Social networking sites have done a lot to pull down the barriers and often encourage instantaneous engagement.

There are a range of online behaviors that have the potential to cause children serious emotional and even physical harm. Sexual abuse images are a potential risk to children’s wellbeing either from direct involvement or from exposure online. The increasing sexualization of technological interactions, including the practice of sending sexually explicit texts (called sexting) can also cause not only emotional harm, but also has the potential for prosecution in many jurisdictions.<sup>30</sup> Risky behaviors moving from online to real world interactions include the practice of compensated dating, currently limited to some Asian countries, whereby teenage girls arrange meetings with men, using the Internet, in return for gifts or money.<sup>31</sup> Online communities also provide individuals with the opportunity to have much greater awareness of the regular activities and locations of others than they would in the



offline world.<sup>32</sup> This has led to some law enforcement entities and corporations, across the globe, expressing concern about the risks of stalking, real-world bullying or harassment.<sup>33</sup> A number of U.S. states have shown concern about this issue and have enacted legislation relating to cyber-stalking such as Wyoming where usage of electronic means for stalking and prior convictions leads to an increase from a misdemeanor offense to felony stalking.<sup>34</sup>

Education is an important component in the effort to keep children safe online and to increase digital literacy. Children need to be taught about how to protect themselves online just as they are taught about the perils of engaging with strangers in the physical world. Parents also need to engage with their children's online usage as much as possible.

## Conduct Risks

There are also a range of risks directly related to the way children conduct themselves online. The children who are growing up today have never lived in a world without the Internet and the guidelines for online behavior are being set. The conduct in which they engage can have a physical, emotional and even a financial effect on themselves and others.

Conduct has a number of risks to physical wellbeing including Internet addiction and gaming which can, in the most extreme cases, lead to individuals failing to take care of their real-world health.<sup>35</sup> There was an unfortunate trend that received a lot of media attention, which was referred to as 'happy slapping',<sup>36</sup> wherein violent attacks were filmed and passed around the Internet. France actually criminalized this specific activity in 2007 making those who created a video complicit in the crime they witnessed.<sup>37</sup> Real world bullying can also extend into bullying online, referred to as cyberbullying, and can lead to serious emotional harm. There are a range of interactions that can have a financial impact on either the users themselves or others through hacking, fraud or even excessive online gambling.

The key to combating these risks is the promotion of reputation management and media literacy. Children need to understand that what they do online can have an impact on the rest of their lives. Universities and employers are using an individual's online presence as an additional means of evaluating the quality of candidates. Children also need to be taught the real world consequences of their online behaviors: what they do online has an impact offline.





# Culture of Responsibility and Digital Citizenship

## Culture of Responsibility

FOSI designed a framework which articulates the role of various stakeholders in tackling online safety issues. There are six layers of society that must accept responsibility for keeping children and teens safe online. Many of these entities are already taking great strides towards a safer Internet, but all components must work together to truly make the Internet safer.

- Government must provide reasonable oversight and support, fund research, promote educational messages and craft reasonable laws.
- Fully resourced law enforcement must be enhanced to deal with the highly sophisticated ways criminals are exploiting online weaknesses to take advantage of users' personal information.
- The Internet industry must support self-regulatory efforts to protect children from the worst of the web. These efforts should include developing more stringent privacy controls and educating their customers on how to stay safe online.
- Tech-savvy teachers are needed who not only know how to use the new and rapidly changing technology but also understand how to integrate it into their classrooms.
- Empowered parents should be aware of what their children are doing online and have a basic understanding of the different modes of socialization, including social networking sites, texting, video games, cell phones, etc. Parents should have a continuous conversation with their children about what they are doing online and should establish household rules for the Internet.

Resilient kids play an especially important role in participating in a culture of responsibility online. They should learn how to make wise choices about the information they access and post online.



**Encourage Children to Make Wise Choices Online.**

## Digital Citizenship

The discussion of digital citizenship is an integral component of any report on online safety. This concept has gained considerable support and credibility in the last few years as it reflects a fundamental multi-stakeholder approach to online safety. Digital citizenship goes beyond ideals of personal conduct online and includes thought for the impact conduct might have on others.<sup>38</sup>

*"Critical thinking and ethical choices about the content and impact on oneself, others, and one's community of what one sees, says, and produces with media, devices, and technologies."*  
– Anne Collier, NetFamilyNews.org<sup>39</sup>



There are five key elements that make up effective digital citizenship. Setting out norms of good behavior, often called “good citizenship” or “online etiquette.” Encouraging individual participation, or civic engagement, this is also seen as community, social, or political activism online. Individuals also need to have a sense of membership or belonging. Three types of literacy must be encouraged: technical or digital literacy, media literacy, and social literacy. And finally, what often comes to mind when people hear “citizenship” are rights and responsibilities. Rights might include access and participation, freedom of expression, privacy, physical and psychological safety, and safety of material and intellectual property. Responsibilities might include respect for self, others, and community; protection of others’ rights and property; learning and benefiting from the literacies of digital citizenship.

Throughout the world, digital citizenship is gaining considerable momentum right across the multi-stakeholder spectrum. It provides an important framework in which to bring together and share both offline and online issues. Examples are shown throughout the regional editions in this report and indicate that it is becoming a benchmark approach for many citizens, communities and countries.



## Data Selection

With such a broad spectrum of risks and the speed with which technology has evolved, it has been difficult for parents, schools and the wider stakeholder community to keep pace with effective online safety measures. Research conducted even two or three years ago can quickly become out of date and therefore a global analysis of the risks young citizens face around the world is essential to draw attention to the gaps in knowledge that currently exist. This report is based on FOSI's work to build the online Global Resource and Information Directory (GRID).<sup>40</sup> The aim of GRID is to provide the first comprehensive and comparative analysis of countries efforts in the field of online safety.

Countries were examined around three themes: efforts to tackle online safety, efforts to improve access to the Internet, and efforts to improve ICT integration into education. To determine what issues drove these particular policies, the GRID research team took into account the socio-economic and political environment and challenges facing each government. The countries, states, provinces and territories used in this report were selected to provide an overview of online safety, but it is by no means comprehensive.<sup>41</sup> GRID will continue to be enhanced in order to provide full global coverage and should be consulted for updates.

- North America: 3 Countries, 50 States, 4 Provinces
- Central America and the Caribbean: 8 Countries, 1 Territory
- South America: 9 Countries
- Europe: 54 Countries
- Middle East: 9 Countries
- Oceania: 7 Countries, 6 States, 2 Territories
- Africa: 18 Countries
- Asia: 20 Countries, 2 Special Administrative Regions

Data was taken directly from governments, think tanks, corporations and non-profit organizations in each country. Language and phraseology were the major barriers to presenting the information in an easily accessible way for GRID users. Translators and a range of experts assisted in interpreting data that was not initially available in English. Researchers attempted whenever possible to create a précis of the legislation to retain meaning and present the findings using more universal terminology. Country-or-regional specific terminology has been highlighted and explained for the reader as needed.



# Research

## Usage and Access

The interaction of young people and the Internet has been a subject of interest for several years, but has recently received wider attention from researchers. The works covered in this section are primarily from North America, Europe, Australia and New Zealand. Limited information is available from the Middle East, Africa, Asia, the Caribbean, and Central and South America. A number of studies look at children's usage patterns and the ways they access the Internet in specific regions.<sup>42</sup> The results of these studies indicate similarities in the way the Internet is integrated into children's lives and their social circles across the world. Studies also look at how social networking sites (SNS) shape individuals' social interactions both online and offline.<sup>43</sup> Mobile phone usage among young people, specifically in order to access the Internet, is also an important growing area of research.<sup>44</sup>

## Content Risks

Researchers examine the content available to children online and the potential risks they face. Studies ask children whether they have been exposed to adult content, like pornography, and how they felt about it.<sup>45</sup> Some research also looks at the risks to data privacy faced by individuals online, particularly from social networking sites.<sup>46</sup> There is also a trend in research examining the instances of children's exposure to harmful user-generated content.<sup>47</sup> Researchers are beginning to look at the commercialization of children's activities online through the games they play and the advertising on the websites they visit.<sup>48</sup>

## Contact Risks

Research into risks from contact online primarily focuses on children's privacy and interactions with strangers. Surveys ask children who they accept as friends on SNS and with whom they interact online.<sup>49</sup> Many studies look into how SNS are used for online child grooming and sexual solicitation.<sup>50</sup> The creation and distribution of sexual abuse images is one of the most heavily researched issues across the world. Research looks at the relationships that are used to coerce children into making these images as well as the

websites which host them.<sup>51</sup> Reports also look at the how a country's development in ICT and commitment to online security issues affects the spread of child pornography.<sup>52</sup> Research also covers the issue of sexting, why teens are doing it and who they are doing it with.<sup>53</sup>

## Conduct Risks

Some studies look at what young people consider acceptable online behaviour and how it compares across regions.<sup>54</sup> Research on cyberbullying includes questions about motivations for conduct, the relationship of bullies to the bullied, and how children cope with bullying.<sup>55</sup> Research also looks into the effect of cyberbullying on children's wellbeing including self-harm and even suicide.<sup>56</sup> Research is also being done on Internet and gaming addiction and a number of government-sponsored addiction clinics are beginning to appear in countries such as South Korea<sup>57</sup> and China.<sup>58</sup>

## Managing Risks

Parental controls are one of the main techniques used to manage online risks and prevent future harm. There are a number of studies, primarily focused at a regional level, that ask parents about their attitudes toward these controls including *Who Needs Parental Controls? A survey of awareness, attitudes and use of parental controls*.<sup>59</sup> Research also looks at the role of filtering technologies and their effect on online safety.<sup>60</sup> There is a lot of work being done on the integration of online safety, ICT curricula and digital literacy into basic education.<sup>61</sup> Research on mobile education is also increasing with examinations of key industry players and country-specific studies.<sup>62</sup>





## Key Reports

- Livingstone, S., Haddon, L., Görzig, A., and Ólafsson, K. (2011) *Risks and safety on the internet: The perspective of European children. Full Findings*
- Pew Internet (2011) *Social networking sites and our lives. How people's trust, personal relationships, and civic and political involvement are connected to their use of social networking sites and other technologies.*
- Media Awareness Network (2005) *Young Canadians in a Wired World – Phase II: Student Survey*
- Kaiser Family Foundation (2010) *Generation M2: Media in the Lives of 8 to 18 year-olds*
- FOSI (2011). *Who Needs Parental Controls? A survey of awareness, attitudes and use of parental controls*
- The 2010 Norton Online Family Report

## Case Study – EU Kids Online

The EU Kids Online project is the most comprehensive regional study of children and the Internet. The project released the second report in September 2011 which includes survey data from 25,142 children aged 9 – 16 and their parents in 25 European countries.<sup>63</sup> Issues explored in the report include children's Internet usage, the risks they face online and the instances of actual harm they encounter.

### Key Findings:

- The majority of children in Europe still access the Internet at home and at school, but interestingly 49% of children access the Internet in their bedroom and 33% use a mobile device.<sup>64</sup>
- Children's activities online almost exclusively involve playing games and doing homework at the start of their usage, but as they get older they begin to consume media and join SNS.<sup>65</sup>

- Only 14% of children surveyed had seen some sexual imagery online, with older children and boys being exposed more than other groups.<sup>66</sup>
- In terms of harmful user-generated content, 12% of 11-16 year olds saw hate sites, 10% saw pro-anorexia sites, 7% saw self-harm sites, and 5% have seen suicide sites.<sup>67</sup>
- The majority of friends children have on SNS are individuals they have met face-to face-with 39% engaging with individuals with whom they share a mutual connection and 25% engaging with individuals outside their social circle.<sup>68</sup>
- Cyberbullying is often committed by those who are themselves bullied and the majority of bullies who have done so online, have also bullied offline.<sup>69</sup>

### Harm vs. Risk:

The EU Kids Online report also tackles the important distinction between potential harm, or risk, and actual instances of harm. Not all risks will lead to harm and the report asked children how they felt when they encountered an instance of actual harm.

- Being bullied online is the risk that upsets children the most, even though it is among the least common.<sup>70</sup>
- Meeting new people offline – the risk that the public worries about the most – very rarely upsets children, although when it does upset them the consequences can be very serious.<sup>71</sup>
- While society may judge, on moral grounds, that children should not be exposed to sexual content; children are only upset by such exposure in a few circumstances, while in others such exposure may be pleasurable.<sup>72</sup>
- Among the minority upset by sexual content, children are most upset by being asked to talk about sexual acts with someone or being asked for an image of their genitals (by comparison, for example, with sexual messages or images of intercourse).<sup>73</sup>



# Education

Countries have a distinct development process for integrating Information and Communication Technology (ICT) into education. ICT is frequently seen by governments as a key element in building a digital economy which leads to increased global competitiveness and improved student employability.<sup>74</sup> The evolutionary path seems to be based on governments constructing plans for ICT curricula then corporations and non-profit organizations assisting with the provision of resource, like computers, and providing teacher training. Collaborative policy across sectors is a key component in the construction of successful ICT programs. As Internet integration increases, countries begin to tackle the larger issues of digital citizenship: going beyond basic literacy and into programs for online safety education.

## Access

The early process of ICT integration involves determining how technology will be integrated into the classroom. This includes installing new computers and providing Internet access. Bolivia is a key example of a country that is working to provide basic education and technology resources in schools as part of the Chaski project.<sup>75</sup> Uganda,<sup>76</sup> Pakistan<sup>77</sup> and Colombia<sup>78</sup> are just some of the many developing countries which are working on programs with outside partners to provide schools with refurbished computers. Other programs provide teachers<sup>79</sup> and students<sup>80</sup> the opportunity to purchase discounted computers to encourage greater use and reduce inequalities based on income as shown in the case study of Taiwan.<sup>81</sup> The rural and urban divide is frequently a major access issue which requires substantial non-profit and corporate involvement to overcome, as seen in the Information Boat scheme which operates in a remote part of north-eastern Bangladesh<sup>82</sup> and Cambodia's Rural Schools project.<sup>83</sup>

## Teacher Training

Teacher training is a crucial part of ICT education which involves guidance on best practice through government -provided portals. Online education portals are provided by governments all over the world from

Honduras<sup>84</sup> to Mongolia.<sup>85</sup> At the regional level the European Schoolnet program provides a portal to facilitate information exchange between countries.<sup>86</sup> These portals provide teachers with materials to design effective ICT curricula including lesson plans and classroom handouts. Some portals provide teachers with the opportunity to take online courses to learn more about the technology they will be using. Corporations are also promoting teacher training and in some cases sponsoring competitions. One such competition was held in Kazakhstan for teachers to design the best ICT-related teaching resources.<sup>87</sup>

## Community Programs

In many countries, basic ICT education is essential: not just for children, but for all citizens to improve basic digital literacy. Community centers have been developed which are located in more rural areas that have poorer Internet access. Such centers have been established on every continent and are discussed in detail in our regional editions, particularly in regions such as Africa, South America and Asia. These centers provide a hub for ICT education where people can go to access computers and take ICT courses. They provide the essential service of reaching more marginalized groups and allowing them to be exposed to a whole range of new technologies.

## Student-Centred Education

In both developed and developing countries, schools are using particularly innovative strategies to encourage students to take a more active role in their education and contribute to the structure of the curriculum. Classroom -based education is usually teacher-led, with students as more passive actors.<sup>88</sup> When technology is introduced to the classroom this method is challenged, particularly in developing countries where ICT equipment does not include electronic whiteboards or digital projection.<sup>89</sup> Teaching styles therefore evolve towards a more student-centred approach, which fosters discussion and interaction between students.<sup>90</sup> Mobile technology and SNS are being used to better connect students and teachers in schools around the world, allowing for the sharing of best practice and international engagement.



## Online Safety and Digital Citizenship

As countries develop ICT programs, more attention is paid to the issue of digital citizenship and how students should behave online. Acceptable use policies and codes of conduct are introduced, particularly where students are issued computers for their educational use, as in Trinidad and Tobago.<sup>91</sup> Government-sponsored awareness campaigns both inside and outside schools increase student awareness of the risks that face them online.<sup>92</sup> As ICT curricula develop, online safety modules are introduced to children at younger and younger ages as is seen in South Korea.<sup>93</sup> The key to instilling a strong culture of digital citizenship goes beyond schools and involves multiple areas of society accepting responsibility.

### Case Study – Taiwan

The integration of technology into state-run education is a major priority for Taiwan as is shown by the White Paper produced by the Ministry of Education (MoE) on Information Technology Education for Elementary and Junior High Schools 2008 – 2011.<sup>94</sup> The White Paper focuses on encouraging teachers to use imaginative strategies to incorporate ICT into the classroom.<sup>95</sup> Other goals include the implementation of a curriculum designed to help students build problem-solving skills and learn about online safety. Online safety would be integrated into primary and secondary schools through newsletters and a series of competitions. Other actions include the improvement of IT equipment in schools, the promotion of digital teaching resources, wireless networks for campuses, as well as ongoing teacher training and free software. In 2008, 175 schools participated in a Ministry of Education-sponsored competition to design imaginative strategies for using ICT in education.<sup>96</sup> All teams received sponsorship until the end of the competition, and ten teams were selected as winners.

In addition to school-based technology education, in 2005 the MoE launched the 'Create Digital Opportunities for Rural Areas' program.<sup>97</sup> The overall aim of the project is to set up Digital Opportunity Centers (DOCs) in remote areas of the island, where residents can access computers and the Internet. The DOCs allow children to utilize digital resources

for learning purposes and provide a crucial opportunity to improve the digital capabilities of adults in rural areas. The skills learned at these centers can be used to promote local agriculture, forestry, fishing and tourism industries. This program is a crucial component in the effort to bridge the digital divide and drive rural development.<sup>98</sup> As at December 2010, the project had succeeded in establishing 173 DOCs across the country.

The National Computer Project is a joint initiative by the MoE and county and city education departments, to enable children from low-income families to access information technologies outside of school. The program is designed to improve children's digital literacy and hopefully their overall quality of life.<sup>99</sup> Children will receive a computer for three years with free Internet access. The children will also receive computer training and their parents will be provided with the opportunity to take part in training and parent-child workshops. DOC tutors and school teachers teach participants basic Internet safety measures and educate them in how to use common computer applications. Further into the three-year period, the children will receive software for advanced users and participate in digital literacy tests. Between 1996 and 2000, over 13,000 children benefitted from this project.



# Legislation

## Development Stages

Generally speaking, legislation relating to online safety risks in individual countries corresponds with the stage that they are at in their digital development. Countries in the earliest stages of digital development are seen to be focused on building infrastructures and tackling issues with cybercrime.<sup>100</sup> There are large divisions in digital literacy which means there is less concern about privacy and contact risks than at later stages in development. As countries progress to the interim stages of development, governments become more aware of the risks associated with digital usage. Users have better Internet knowledge allowing them to explore more complex aspects of online usage like social networking sites which leads to greater exposure to content and contact risks. The most advanced countries deal with the more complex risks associated with full integration of the Internet. Commercialization of children becomes a problem as companies become more active in their online advertising.

## Hacking, Fraud and Filesharing

Countries are beginning to enact legislation that covers malicious activities designed to harm individuals online through viruses or hacking as seen in Jordan<sup>101</sup> and Lithuania.<sup>102</sup> Governments have also set out sentencing guidelines based on the use of the Internet to defraud individuals.<sup>103</sup> Crimes involving fraud include identity theft, phishing and the 419 or advanced-fee fraud crimes that have been a major issue in Nigeria.<sup>104</sup> Fraud schemes are particularly problematic in countries where gaps exist in digital literacy and criminals can exploit user ignorance. Penalties for violation of copyright and illegal filesharing through the Internet are appearing in the legislation of some countries such as Indonesia<sup>105</sup> and Germany.<sup>106</sup>

## Sexual Offenses Online and Child pornography

Legislation in this area includes communication with a child online for the purpose of committing a sexual offense as well as luring or abduction. Countries like New Zealand are drafting legislation to include the various ways the Internet can be used to facilitate prostitution or sexual tourism.<sup>107</sup>

As countries develop digitally, the way they tackle the distribution and creation of child pornography changes. Early legislation includes prosecution for the creation and distribution of these images which is extended to include crimes involving the Internet. On the other end of the digital development spectrum, accessing and possession of child pornography is criminalized. The most comprehensive legislation has a broad definition of what is covered as pornography including composite or animated images.

## Libel, Defamation, Hate Speech and Bullying

Some countries have specifically extended libel and defamation legislation to include digital media as in the Dominican Republic.<sup>108</sup> The issue of hate speech is just as problematic online as offline and countries, like Canada, have passed legislation making it a criminal offense to advocate hate against a certain group.<sup>109</sup> Cyberbullying is also an issue with fines and sanctions for those who harass others through the use of technology.

## Privacy and Information Usage

Concern about the way companies are utilizing user data has led to the extension of existing legislation to cover user data privacy in the online sphere.<sup>110</sup> Information usage legislation also includes the spread of spam or nuisance messages through email or instant messaging. For example both Australia<sup>111</sup> and New Zealand<sup>112</sup> have passed legislation making the sending of spam illegal.

## Gaming Regulations and Internet Addiction

High Internet connection speeds mean that some countries have had to create legislation to place curfews on popular online games. In 2003, Thailand became the first country to take such a step.<sup>113</sup> Some countries, like South Korea, are also working to combat serious issues relating to Internet addiction and now offer free software to users which will regulate their usage time.<sup>114</sup>





## Case Study - Children's Online Privacy Protection Act (COPPA)

The Children's Online Privacy Protection Act was passed in 1998,<sup>115</sup> and the Federal Trade Commission (FTC) was charged with its implementation and enforcement. In 2000 the FTC passed the Rule<sup>116</sup> governing compliance with the law. At its most basic the Rule requires that all websites directed at children obtain verifiable parental consent prior to collecting and using personal information from a child under thirteen.<sup>117</sup> It specifies that all privacy notices that are posted are clear and easy to understand and dictates that certain information that must be contained within them. The Rule also foresees a system of 'safe harbors' whereby Industry groups or others can create self-regulatory programs to govern participants' compliance with the Rule.

In the eleven years since it was enacted the FTC has remained vigilant and has brought a number of enforcement actions against websites and apps who were deemed not to be in compliance.<sup>118</sup> There have also been two reviews of the effectiveness of the Rule,<sup>119</sup> most recently on September 15, 2011<sup>120</sup> suggesting revisions to the following areas:

- Definitions of 'personal information' and 'collection'
- Clarification of the 'parental notice' methods
- Alteration of the parental consent mechanisms
- Strengthening of the confidentiality and security requirements for children's personal information
- Improving the FTC's oversight of the self-regulatory "safe harbor programs"<sup>121</sup>

Although this is a U.S. law the FTC has made it clear that COPPA requirements apply to foreign-operated websites that are 'directed' at children in the U.S..<sup>122</sup> Also, many websites around the world automatically impose a thirteen and up requirement to be in compliance with U.S. law.



# Organizations

A wide variety of organizations are fundamental to the promotion of online safety and prevention of harm to children. Within some individual countries a number of online safety issues are divided between the government departments for education, communication and technology, and justice. Governmental resources for online safety include specific portals for ICT education with online safety components and online safety-specific websites.

## Non-profit Organizations

The involvement of non-profit organizations is crucial in the promotion of online safety by building up the basic infrastructure and working with corporations and governments to provide the resources necessary for education, such as computers and training materials. Non-profits contribute significantly to efforts to bridge the digital divide that exists between developed and developing countries. The Massachusetts Institute of Technology Media Lab launched the non-profit organization, One Laptop per Child (OLPC) to provide a basic laptop to all the poorest children in the world, especially in developing countries.<sup>123</sup> A number of non-profits are working with governments to tackle specific safety risks like cyberbullying, the spread of child pornography and harmful contact with strangers. The work of many of these non-profits is highlighted in our regional editions.

## International Organizations

There are a range of global organizations that have an impact on online safety. Among the 54 Commonwealth countries, the COMNET Foundation deals with ICT developments. The Organisation for Economic Co-operation and Development (OECD) provides a forum for the sharing of best practice from around the world and currently has a working party on information security and privacy. The largest international organization is the United Nations, which has many arms providing the most comprehensive commitment to online safety. The International Telecommunication Union (ITU) is the leading UN agency for ICT issues and arranges forums to bring individuals together to discuss technology issues. The ITU organizes worldwide and regional exhibitions, bringing together the most influential representatives of government and the telecommunications and ICT industries, in order to

exchange ideas, knowledge and technology for the benefit of the global community, and in particular the developing world.

## Industry Standards Bodies

There are number of standards bodies dealing with oversight of the Internet. The Internet Corporation of Assigned Names and Numbers (ICANN) is a non-profit that manages Domain Name Systems (DNS) by handling pricing and terms of use. The World Wide Web Consortium (W3C) is an international community which develops standards to ensure the continued long-term growth of the web. There are also a number of associations of various technology carriers and suppliers that work to bring about a more collective approach from industry, creating opportunities to engage with governments, set standards and grow markets.

## Law Enforcement Organizations

In the effort to promote online safety and curb risks there are a number of law enforcement agencies that exist around the globe that focus on issues related to child exploitation. The Child Exploitation Tracking System (CETS) provides a secure way for law enforcement officials to share information relating to crimes involving the sexual exploitation of children. The Comprehensive Operational Strategic Planning for Police (COSPOL) initiative provides international cooperative networks of law enforcement across Europe. Online child exploitation issues are handled by CIRCAMP which blocks material and identifies payment systems. The Child Exploitation and Online Protection Centre (CEOP) also supports international protection against sexual exploitation. INTERPOL is the main international police organization which looks at issues of child exploitation.



## Case Study – UNESCO United Nations Educational, Scientific and Cultural Organization

UNESCO's Next Generation of Teachers (Next Gen) project provides crucial assistance throughout Asia and Oceania by providing teachers with opportunities to acquire ICT knowledge and skills.<sup>124</sup> Next Gen works to increase the capacity of Teacher Education Institutions (TEIs). Some of the ways in which this is being achieved include enhancing the leadership in TEIs through the Deans' Forum; updating the skills of teacher educators through ICT-pedagogy integration workshops; and assisting curriculum reform in pre-service teacher education through curriculum development workshops. Next Gen Phase 2 was launched with the 4th Deans' Forum in Bangkok in June 2009.<sup>125</sup> Two forum highlights were the commitment of the Deans to organize local initiatives to promote ICT in teacher education and UNESCO Bangkok's announcement that they would deliver a series of curriculum development workshops from 2009 to 2011.<sup>126</sup>

In addition to the Next Gen project, UNESCO Bangkok operates a range of ICT-related projects in six key areas: policy, training of teachers, teaching and learning, non-formal education, monitoring and measuring change and research and knowledge sharing.<sup>127</sup> One of the projects aims to support the connection of schools to the Internet and create a network of schools. The SchoolNet initiative promotes the effective use of ICT in learning and is envisaged as being a means by which connections can be made and strengthened among students, teachers and schools.<sup>128</sup> Other benefits include the ability to share information and resources, and to prepare learners for entry into knowledge-based societies. SchoolNet also encourages the creation of locally-relevant and high-quality educational resources through ICT and champions lifelong learning.<sup>129</sup>

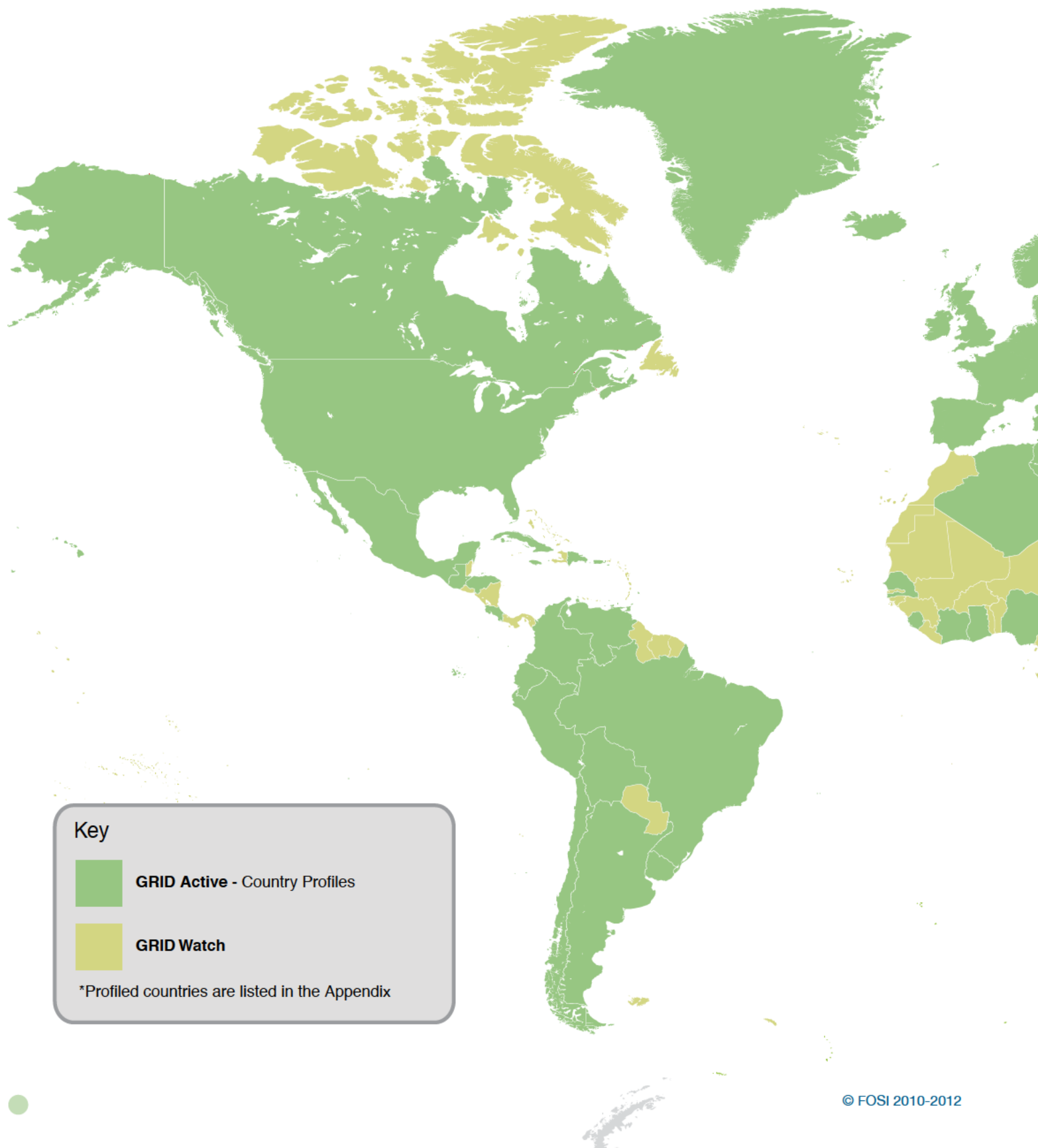
## Case Study – Microsoft

Microsoft is doing extensive work reaching out to local schools to promote Internet safety practices in countries across the world. Within countries, Microsoft partners with a number of charities and government organizations to run online safety workshops and ensure the full integration of ICT into the classroom. In Ecuador, Microsoft works with ChasquiNet Foundation to deliver the Inter@ctive Schools program, an initiative designed to support the integration of ICT into the classroom. They offer training to teachers on a variety of ICT-based topics, although these are chargeable.<sup>130</sup> Microsoft's Partners in Learning program helps to provide crucial ICT resources and necessary teacher training to schools across the world.<sup>131</sup> Microsoft's Unlimited Potential (UP) program looks at the whole community with a focus on improving lifelong learning and promoting employability. Since 2005, Microsoft's UP program has been supporting Pakistan's Community Technology Learning Centers (CTLCs) in the provision of ICT skills training as a tool to empower communities.<sup>132</sup>

Microsoft also helps to run a number of competitions to promote innovation in online safety. In Bulgaria, the Safer Internet Center and Microsoft Bulgaria run the annual 'Children's Safety on the Internet' campaign, which comprises events and competitions held all over the country.<sup>133</sup> In Ghana, Microsoft and two other organizations partnered to host an Internet Safety, Security and Privacy (ISSP) convention in Accra.<sup>134</sup> The aim of the conference was to look at alternative ways of fighting cybercrime in the country. In 2008, the government formed a partnership with Microsoft and a local non-profit organization; Focus on Ghana, to engage young people in facing the challenges of cybercrime.<sup>135</sup>



## Country Profile Coverage\*



### Key

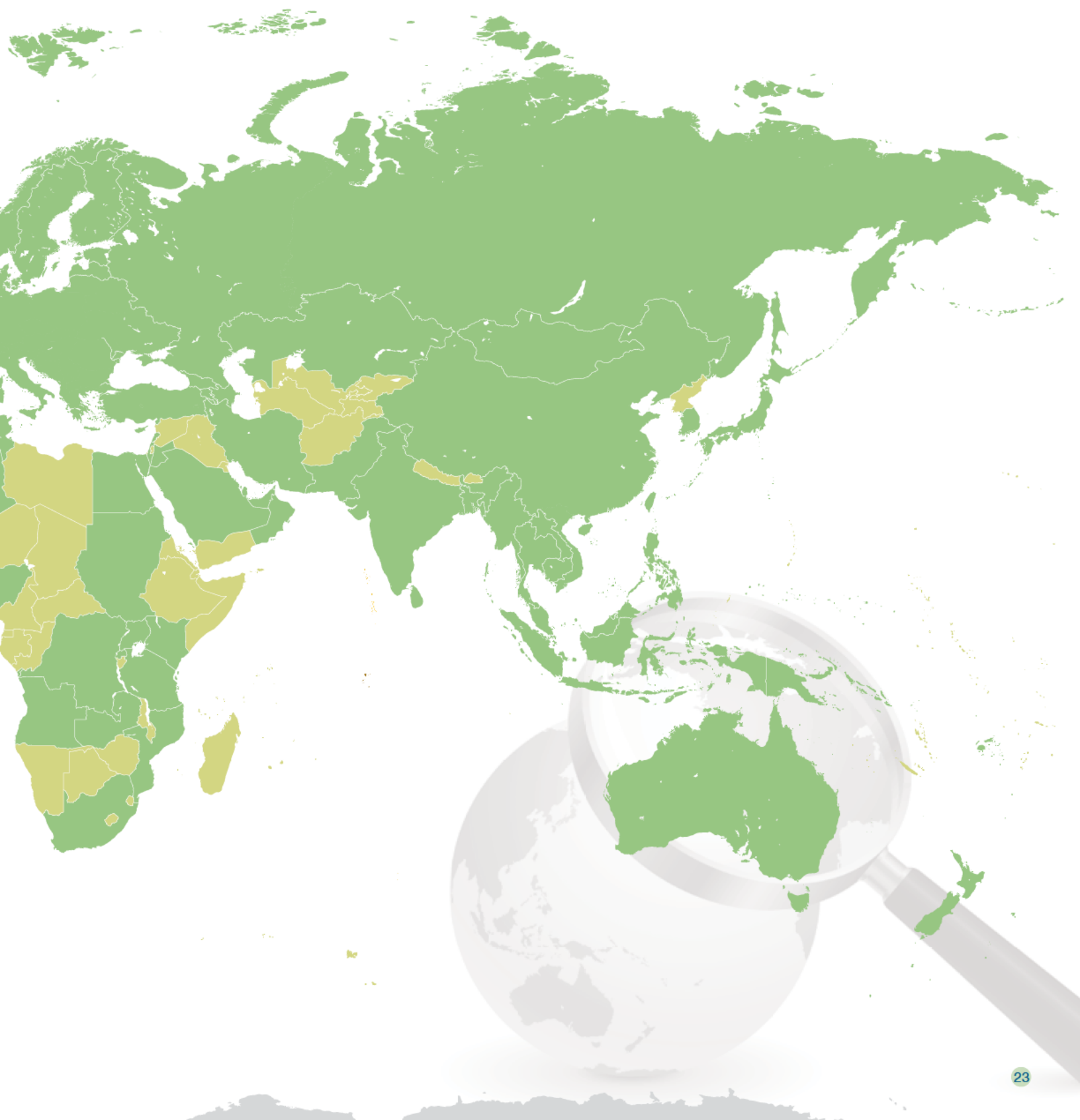


**GRID Active** - Country Profiles

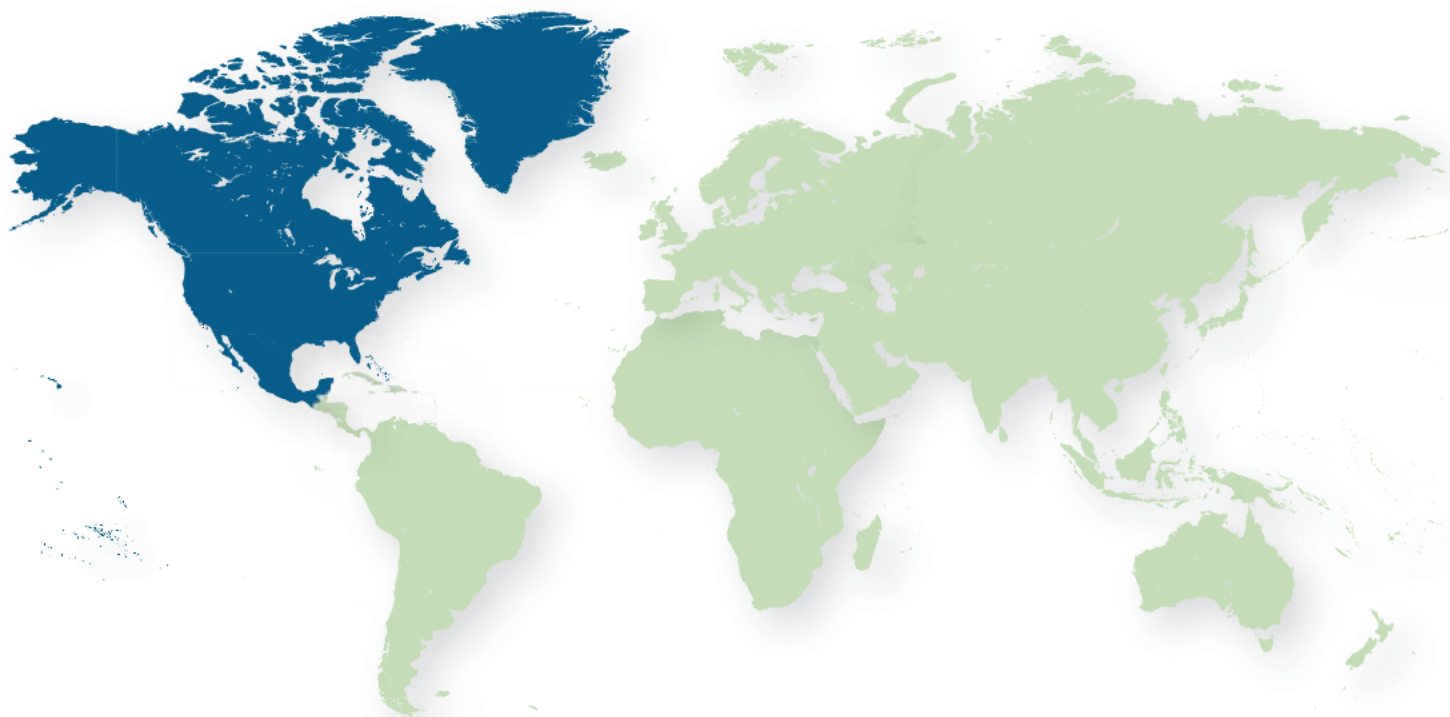


**GRID Watch**

\*Profiled countries are listed in the Appendix



## North America



### Key Figures

Population: 461,119,096<sup>136</sup>

Internet Users: 304,966,000, 66.1% Penetration<sup>137</sup>

Facebook Subscribers: 194,769,870, 42.2%  
Penetration<sup>138</sup>

Mobile Subscribers: 391,537,977 – Q4 2009  
(Canada, U.S. and Mexico)<sup>139</sup>



## Online Safety Overview

The U.S. has been a pioneer in many Internet-related issues, including the appointment of a Chief Technology Officer who advises the President and acts as the Associate Director for Technology for the Office of Science & Technology Policy.<sup>140</sup> Other initiatives include the creation of an Internet safety month, in June,<sup>141</sup> and the establishment of the first North American center for the treatment of Internet addiction, in Washington state.<sup>142</sup> At the state level there has also been a movement among a group of Attorneys General to make social networking sites safer for children.<sup>143</sup>

Canada has done a great deal to promote Internet safety, including the promotion of user education and empowerment, industry self-regulation, strengthened enforcement of laws in cyberspace, hotlines for reporting, and cross sector consultation.<sup>144</sup> Mexico has Internet safety resources as well, but they are not nearly as developed as those in the north. The Internet Security Alliance (ASI) is the major source for Internet safety information in Mexico and is a corporate and non-profit organization partnership. The ASI acts as the country's reporting node and allows users to report illegal online content.

**U.S.: The National Center for Missing & Exploited Children is working with a number of industry players to provide geographically targeted Amber alerts when children are reported as missing. America Online, Inc. (AOL) was the first to extend the Amber alert system into the digital space in 2002.<sup>145</sup> Microsoft,<sup>146</sup> MySpace,<sup>147</sup> Google, Yahoo and now Facebook<sup>148</sup> all offer the Amber alert function to their users.**

The Canadian Radio Television and Telecommunications Commission (CRTC) was one of the first broadcasting and telecommunications regulators to announce it would not try to regulate the Internet.<sup>149</sup> Canada has extensive legislation regarding illegal activities including issues relating to privacy, sexual exploitation, and online hate

speech. At the provincial level, Nova Scotia's 2008 Child Pornography Reporting Act makes the failure to report child pornography a criminal offense.<sup>150</sup> The U.S. has a number of specific issue-related laws at the state level and generally robust legislation on the prosecution of sex offenders. A number of U.S. states have laws regarding anti-bullying for schools and some states are taking on the issue of sexting. Mexico has started to create laws regarding child pornography.

**The U.S., Canada and Europe all celebrate Data Privacy Day each year in January, conducting activities to raise awareness of the need to protect personal information and privacy issues.<sup>151</sup>**

## Research

Research in the region is extensive, dealing with a number of issues including cyberbullying and the sexual exploitation of children online.

**The U.S. Cyberbullying Research Center reports that in 2010, 20.8% of the children it surveyed had been the victims of cyberbullying compared to 36.7% in 2005.<sup>152</sup>**

However, there are a few studies that take a more inclusive approach to online security and incorporate children's views. The *2010 Norton Online Family Report* looks at the amount of time children spend online and the negative experiences they have, but results only cover the U.S. and Canada.<sup>153</sup>

**In both the U.S. and in Canada, six out of ten parents responded that they felt that parents should have full control over what their children do online.<sup>154</sup>**

In the U.S., the Pew Internet and American Life Project is looking at the broader impact of the Internet on families, communities and education.<sup>155</sup> *Social networking sites and our lives. How people's trust, personal relationships, and civic and political involvement are connected to their use of social networking sites and other technologies* is a report showing the results of Pew's survey of 2,000 adults looking at the ways they use social networking sites.<sup>156</sup> FOSI and Hart Research Associates recently conducted a survey of U.S. parents with children aged 8 -17 looking at parental awareness of online safety and how they monitor their children's usage.<sup>157</sup>

Of the 46% of parents who do not use parental controls to mediate their children's Internet use, 71% of parents with children aged 8 – 10 felt they were not necessary because they had rules or limits in place.<sup>158</sup>

There is a gap in the research for a comprehensive study based on children's views for the entire continent which would better highlight the differences in online safety attitudes that exist both within countries and across the region.

## Increasing Access

Internet penetration in Canada has been extensive for a long time and it was the first country in the world to connect all public schools and public libraries to the Internet. *Canada Online! The Internet, media and emerging technologies* study found that 96% of children aged 12 – 17 are now online.<sup>159</sup> Access issues in Canada now focus on inequalities in access with a 15% gap in usage between English-speaking and French-speaking Canadians.<sup>160</sup> The report also highlighted major growth in access in rural areas showing a general trend toward improving access.<sup>161</sup> The United States continues to be the leader in the expansion of Internet technologies and online resources including advancements in social media. Broadband expansion is a major priority in the U.S. and the American Recovery and Reinvestment Act of 2009 provided \$7.2 billion in funds to ensure that everyone in the states has access to broadband capability.<sup>162</sup>

The U.S. and Canada continue to tackle remaining connectivity issues in rural areas and are also facing complications in the variety of routes of access available to young people. Internet access is now primarily from home computers rather than public locations and increasingly young people are accessing the Internet using mobile technologies.<sup>163</sup> Access is still a major issue in Mexico, particularly in poorer rural areas where basic infrastructures are still lacking.

Canada: In March 1999 Canada became the first country in the world to connect all its public schools, including First Nations schools, and public libraries to the Internet.

## Education

Education is primarily handled at the state and provincial level in the U.S. and Canada where the majority of departments of education have established ICT curricula. In Canada, provincial education policies also include components on ethical Internet usage and guides on digital citizenship. The departments of education for the Maritime Provinces created a guideline for the teaching of ICT called the Foundation for the Atlantic Canada Technology Education Curriculum. Digital citizenship and ethical usage of the Internet are discussed as part of the curriculum.<sup>164</sup> The Mexican Secretariat of Public Education has a website with teaching materials and subject-based information for students, however, there is no accessible curriculum or guidance on Internet safety.<sup>165</sup>

## Innovation

In California, the Sacramento Chapter of the Social Media Club's 'Social Crime Forum', was held in August 2009 and showcased a new initiative by the Fairfield Police Department. The Fairfield Police created the '#1 Friend' program, designed to be used with MySpace where children set the department as their number one friend: thereby letting people know that parents are involved and have a link to the police department.<sup>166</sup>





The Ohio Buckeye State Sheriffs' Association and the Cuyahoga County Prosecutor announced the development of a new campaign called Project Shaq Shield.<sup>167</sup> The campaign uses an iPhone app which uses the voice of basketball star, Shaquille O'Neal of the Cleveland Cavaliers, to provide parents with online safety information and to encourage families to take a pledge to establish Internet safety rules.<sup>168</sup> The app is uniquely innovative as it allows parents to access "the first law enforcement-approved Sex Offender Registry on an iPhone".<sup>169</sup>

## Case Study – U.S. States and Canadian Provinces

The safety advice provided by Oregon's Eugene school district's web site is an excellent example of best practice and is actually promoted as such by Montana's Office of Public Instruction. The advice is updated regularly, contains clear guidance for parents, students and teachers on Acceptable Use and also provides details of relevant legislation and board policy on topics such as cyberbullying and harassment.<sup>170</sup> At a broader state level, the Oregon Department of Education provides schools with links to information, often available at no cost, which enables teachers to lead classes on Internet safety issues.<sup>171</sup>

As early as 1999, the New York State Library was circulating publications on Internet safety aimed at parents and, separately, trustees.<sup>172</sup> By 2005, the New York State Handbook for Library Trustees was giving instruction to public libraries on to the risks of offering Internet access to groups of patrons including both adults and children.<sup>173</sup> Directions were given to produce a "carefully considered and judiciously written" policy statement tailored to the library's own community and topics to be included were listed. The state also passed an innovative piece of legislation in 2008 with ESTOP, a law which requires convicted sex offenders to register their e-mail addresses and details of any online identities in order that social networking sites may filter and block them from communicating with minors.<sup>174</sup>

The Canadian province of Ontario demonstrated a strong regard for online safety issues in 2004 when it launched its CYBERCOPS software for Grade 7 and 8 children to receive 'cyberproofing' on issues such as cyberbullying, ID theft and online grooming/luring.<sup>175</sup> The provincial government also called on the federal government to abolish conditional sentences for child pornography crimes: creating minimum sentences for the offense when the law was changed in 2005. The provincial government also provides funding to various online safety initiatives and organizations, most recently the 2006, CAD\$ 5 million campaign to combat Internet luring (online grooming).<sup>176</sup>



## Central America & The Caribbean



### Key Figures

Population: Central America - 42,064,241<sup>177</sup>; The Caribbean - 41,427,004<sup>178</sup>

Internet Users: Central America - 7,833,400, 18.6% Penetration;<sup>179</sup>

The Caribbean - 11,660,570, 28.1% Penetration<sup>180</sup>

Facebook Subscribers: Central America – 6,255,240, 14.9% Penetration<sup>181</sup>

The Caribbean - 5,903,520, 14.3% Penetration<sup>182</sup>

Mobile Subscribers: Central America – 41,648,442 – Q2 2011<sup>183</sup>

The Caribbean – 25,749,618 – Q2 2011<sup>184</sup>



## Online Safety Overview

Online safety programs are not extensively available in Central America; the bulk of Internet related activity concerns ICT integration into education. In the Caribbean, citizens in the Dominican Republic<sup>185</sup> and Trinidad and Tobago<sup>186</sup> can easily access websites with Internet safety information. Internet safety is not commonly taught in schools and few online safety awareness campaigns have been developed. Government-mandated filtering of computers accessed by children is only used in a limited number of countries in the region. Cuba is the most restrictive government in filtering terms and citizens must obtain accreditation to gain access to the Internet. Cybercrime is being dealt with across the region with attention to malicious computer usage including attacks on privacy and the spread of viruses. Laws governing defamation and libel online are also beginning to appear as seen in the Dominican Republic's legislation.<sup>187</sup>

Jamaica: The government has passed a range of legislation to deal with Internet safety issues. The Pornography (Prevention) Act of 2009 has an extensive definition of what constitutes child pornography which includes visual, audio, and written materials that promote sexual activity with a minor. The Cybercrimes Act of 2010 extends misuse of technology to include smart phones as well as covering privacy offenses and data corruption crimes.

## Research

Research on online safety issues in Central America and the Caribbean is extremely limited and is entirely country-specific. The research that exists in Central America includes two projects on efforts to deal with the sexual exploitation of children: *El combate contra la pornografía infantil en Internet: el caso de Costa Rica*<sup>188</sup> and *Methodological Work Proposals for the Prevention of Sexual Violence Against Minors*.<sup>189</sup> Research from the Caribbean includes two studies on Cuba looking at surveillance and cybercrime: *Reporters Without Borders, Going Online in Cuba: Internet under Surveillance*<sup>190</sup>

and *El Delito Informático, Un reto en el nuevo Milenio*.<sup>191</sup> More research is needed on children and young people's activities online and potential risks to their wellbeing for all countries.

## Increasing Access

Wide coverage of Internet access is a major problem throughout the area with financial and political barriers hindering government attention to these issues. Mobile technologies are one important route of access and social networking sites play a key role in communicating quick information about natural disasters with the Haitian earthquake being a key example.<sup>192</sup> International underwater fiber optic cables are also reaching the Caribbean with the potential to allow broadband access at globally competitive rates.<sup>193</sup> Governments are now working on ways to spread access to more rural areas. Digital literacy is also needed to improve public take up of services, such as healthcare, across the region as a whole.<sup>194</sup> Community technology centers used in the Dominican Republic improve not only student literacy but computer education throughout the community.<sup>195</sup>

## Education

Central American and Caribbean countries are at varying stages in terms of ICT integration into education; improving basic school infrastructures is an important focus in many countries. The education sector in this region is an excellent example of cross-sector cooperation with private companies and non-profits working to bring computers into schools. Refurbishment programs for computers are essential to countries like Guatemala which also provides teachers with the opportunity to purchase them.<sup>196</sup> Countries are designing training programs for teachers and building education portals to house essential resources.

Trinidad and Tobago: The country's 'fastforward' national ICT plan involves the integration of ICT into all levels of formal education and calls for the creation of Community Information Centers.<sup>197</sup> The eConnect & Learn (eCAL) program provides laptop computers to all secondary school students.<sup>198</sup> Students must adhere to the National School Code of Conduct on their usage, prohibiting the spread of illegal materials or engaging in cyberbullying.<sup>199</sup>

## Innovation

The Caribbean Telecommunications Union (CTU) launched The Caribbean ICT Roadshow in July, 2009. The roadshow visited Antigua and Barbuda, Belize, Curacao, the Federation of St. Kitts and Nevis, St. Vincent and the Grenadines, the Republic of Suriname, Montserrat, the British Virgin Islands and St. Lucia. Throughout the events, topics such as ICT innovation, capacity building and encouraging collaboration were addressed. The 2010 program of events began in March and culminated in November with an ICT Symposium in Trinidad and Tobago.<sup>200</sup>

Costa Rica: In September 2010, the constitutional court of Costa Rica declared Internet access to be a fundamental right and urged the government to adopt the necessary measures to promote this service nationwide.<sup>201</sup> Costa Rica is the first country in the region to take a rights-based approach to Internet access.

## Case Study – Dominican Republic

The current focus in the Dominican Republic is on increasing ICT provision, although there is certainly information available to educate citizens on cybercrime, Internet safety and reporting of illegal content. The efforts start at the highest level, with the country's First Lady, Margarita Cedeño de Fernández, who is also a member of FOSI's First Ladies Initiative for Online Safety.<sup>202</sup> The First Lady supports the Community Technology Centers (CTC) program, which takes technology to the least-developed parts of the country and acts as an access point for whole communities.<sup>203</sup> In addition to receiving ICT training, individuals can undertake online courses in a variety of fields, such as business administration and family wellbeing.<sup>204</sup> The initiative promotes development in the communities in which the CTCs operate, providing quality education to the poor.

The Dominican Republic is well into the period covered by its 'Ten-Year Educational Plan 2008 – 2018'. One of the goals of the plan is to integrate ICT into the educational process, increasing ICT provision and access to students.<sup>205</sup> The Dominican Institute of Telecommunications is operating a two-year project, 'Computers for Outstanding Youth'.<sup>206</sup> The project aims to identify and select 3,000 low-income young people from 32 provinces, whose score or grade-point average exceeds 90 points, in order to equip them with low-cost computers to strengthen their education.

With Internet penetration rates at 38.7% as of December 2010, increased from 31% at the end of 2008,<sup>207</sup> it is clear that as more citizens access the Internet, safety is an issue which the government recognizes. The National Commission for Information Society and Knowledge (CNSIC) promotes standards, values and behaviors that contribute to integrity, creativity and innovation in navigating through cyberspace, particularly among children and adolescents.<sup>208</sup> Their campaign for Internet safety (Internet Sano) aims to help children and teenagers to navigate the web safely and use it as a tool to build a culture of knowledge and creativity.<sup>209</sup>





## South America



### Key Figures

Population: 400,067,694<sup>210</sup>

Internet Users: 162,779,880, 40.7% Penetration<sup>211</sup>

Facebook Subscribers: 81,969,200, 20.5% Penetration<sup>212</sup>

Mobile Subscribers: 433,833,842 – Q2 2011<sup>213</sup>



## Online Safety Overview

The region as a whole still seems to be in the very early stages of Internet safety development. Online safety priorities include programs to limit the spread of child pornography and efforts to place restrictions on age-inappropriate material. Government plans to filter content for age-inappropriate material are not yet in place in schools and libraries. Across South America the bulk of regulatory responsibility for filtering has been given to ISPs and public Internet access points like cybercafes. Internet safety portals, however, are beginning to appear as well as a number of government sponsored safety awareness campaigns for children.

**Peru:** The government is unusual in the region because it requires all business computers for children's use to have filtering software in place.<sup>214</sup> In January 2009 the Ministry of Women and Social Development launched a campaign aimed at raising children's awareness of safe behavior online. Owners of Internet cybercafes and kiosks were given the opportunity to attend training sessions to make them aware of their online safety responsibilities.<sup>215</sup>

Some countries, such as Venezuela, have sentencing for crimes relating to the distribution of child pornography which is weak compared with other countries in GRID.<sup>216</sup> Brazil is making strides to incorporate online threats into legislation, primarily regarding child pornography and grooming.<sup>217</sup> There is limited information about what South American governments are doing to tackle cybercrimes like hacking and fraud.

**Brazil:** One of the most advanced countries in the region in child safety terms<sup>218</sup> with sentencing similar to the United States.<sup>219</sup> Legislation has been amended to define composite or manipulated images of children as pornography. Brazil has celebrated Safer Internet Day since 2008.

## Research

Research across the region is limited with a very small number of country-specific reports looking at Internet usage and integration of ICT into education. Studies look at the amount of time children spend online and the negative experiences they have, which gives some information on Brazil.<sup>220</sup> The 2007 report from Telefónica, *Situation Analysis of Children & Youth in Argentina with Respect to ICT* examines routes of access and usage among children in Argentina. Research from Colombia looks at the integration of computers into education and the effect on children's attainment.<sup>221</sup> More research into children's online usage in South America is essential for both individual countries and the region as a whole. In particular, research needs to look at children and young people's activities online and potential risks to their wellbeing.

**Brazilian children spend on average 18.3 hours online a week. However, eight of ten admit this is too much.**<sup>222</sup>

## Increasing Access

Basic Internet access and gaps in literacy are major factors that need to be overcome in the region before more active work can take place on online safety issues. Due to gaps in the infrastructure, South Americans tend to access the Internet through mobile phones and other mobile devices. Regional poverty is a major barrier to improving basic Internet access in some countries. Venezuela is very active in the usage of open source software, primarily as an alternative to North American corporations.<sup>223</sup> As a result, all schools in Venezuela run Linux operating systems on their computers.<sup>224</sup>

## Education

ICT integration into education has been slower in this region as some of the countries are behind with providing basic education resources including appropriate buildings, as in Ecuador.<sup>225</sup> Charities and corporations have been integral to the efforts to bring technology into the classroom and to provide teachers with the necessary training. The process of integrating computers into schools has been greatly helped by the efforts of non-profit organizations, as seen in Uruguay with the Plan Ceibal initiative.<sup>226</sup> The

government is working with the One Laptop Per Child (OLPC) scheme to ensure all teachers and students have computers.<sup>227</sup> Even in Bolivia, one of the poorest countries in the region, basic ICT curricula are being developed.<sup>228</sup> Some countries are addressing Internet safety education in schools, like Brazil, but this is an area that needs development across South America.

**Uruguay:** Faced with a teaching community where 90% had no previous ICT experience, Microsoft Uruguay worked with the Council of Primary Education and other expert partners to develop a portal to deliver online training. The training includes demonstrations of the basic concepts of distance learning as well as how ICT can be integrated into the core curricula and how to use computers in the classroom.

**Brazil:** In 2009 it was announced that Safernet and the Federal Public Ministry (MPF) would work with Google and Microsoft to run Internet safety workshops in schools. The program aimed to reach 150 public and 100 private schools across Brazil, focusing on the larger cities.<sup>229</sup>

## Innovation

Non-profit organizations and industry are involved in the provision of educational resources and the use of technology as a way to bridge regional inequalities. The Telefónica Foundation works throughout South America to provide the EducaRed portal and to promote inclusion of technology in education. Teachers also learn how to use social networking tools like Twitter in the classroom.<sup>230</sup> UNICEF and BT launched a program in Brazil called 'edu-communication' targeting low-income communities and using communication tools to improve the quality of education in schools and the wider community. The program will also include components on communication skills in order to improve the employability of young people.<sup>231</sup>

## Case Study – Chile

On February 27, 2010 Chile was rocked by an earthquake registering 8.8 on the moment magnitude scale. The President announced that as many as two million people had been affected by the earthquake. The event was

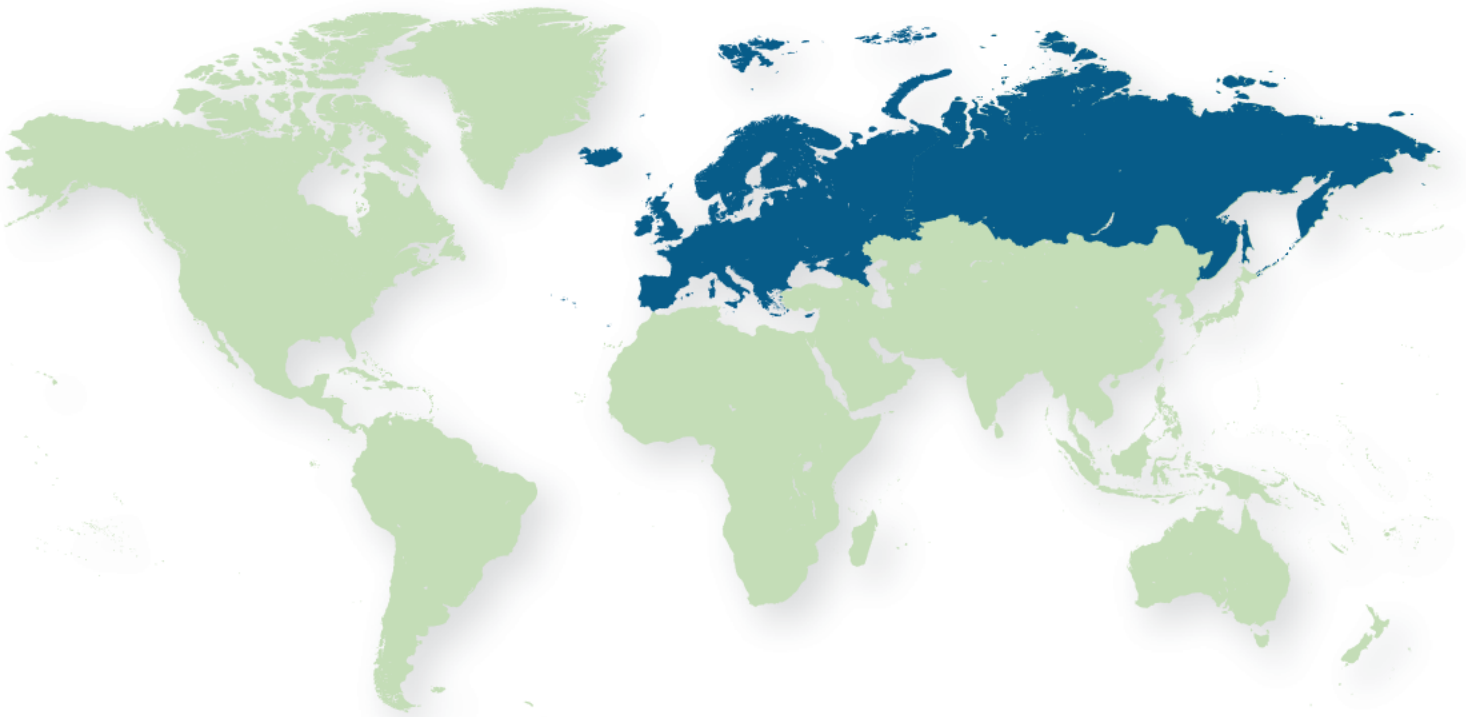
designated as a catastrophe (a state similar to a state of emergency in the U.S., allowing emergency powers to be enacted) and the start of the school year was delayed by a week.<sup>232</sup> Some \$702 million was diverted from the country's budget to cover the cost of earthquake damage.<sup>233</sup> One of the most positive things to come out of the crisis was the extent to which government departments utilized the Internet to restore 'business as usual' to schools. Within a month of the disaster, textbooks were made available online, by the Ministry of Education, in PDF format for schools whose stocks of physical learning materials had been destroyed.<sup>234</sup> The Ministry also provided a substantial amount of online guidance to schools to help students deal with the psychological effects of the disaster, as well as practical advice on how schools could continue to access teaching materials and curriculum standards via the website.

Prior to the earthquake, Links (the Center for Education and Technology of the Ministry of Education) had provided over 10,000 schools with computer labs and 75% of schools were connected to the Internet. Links aims to increase digital literacy among the schoolchildren of Chile and to improve educational standards through the use of computing and ICT. Nearly 110,000 teachers have been trained in the use of ICT and the 2006 National Socioeconomic Characterization Survey (CASEN) reported that some 66% of the most vulnerable students were able to access new technologies at school, enhancing digital inclusion.<sup>235</sup> As part of its digital inclusion strategy, school computer labs have been opened up to the wider community outside school hours, teaching adults computer skills and offering free Internet access. Links runs the Internet safety website, 'Internet Safety For All', which has information for both parents and children and is the primary source of online safety information in Chile.





## Europe



### Key Figures

Population: 816,426,346<sup>236</sup>

Internet Users: 476,278,755, 58.3% Penetration<sup>237</sup>

Facebook Subscribers: 208,907,040, 25.6% Penetration<sup>238</sup>

Mobile Subscribers: 1,010,984,988 as of Q2 – 2011<sup>239</sup>



## Online Safety Overview

The European Commission, within the European Union (EU), places a great deal of emphasis on Internet safety by funding a number of organizations and research projects to address safety issues. The Commission provides funding for InSafe<sup>240</sup> the European network of awareness nodes, INHOPE<sup>241</sup> the European association of hotlines and the European Schools Network<sup>242</sup> in most of the 27 Member States. The Commission also has a reputation for a very collaborative, multi-stakeholder approach. The current Digital Agenda for Europe reflects many of these facets, building on strong and broadly self-regulatory principles.<sup>243</sup> The Digital Agenda aims to “deliver sustainable economic and social benefits from a digital single market based on fast and ultra fast Internet and interoperable applications”.<sup>244</sup> In 2011, the European Commission released a report assessing how Member States measured up to the Digital Agenda aims for children’s online safety.<sup>245</sup> The report found that countries “are not responding adequately” and proposed a series of recommendations to improve online safety.<sup>246</sup>

Underpinning European efforts to make the Internet safer for its citizens is a very vibrant non-profit culture. Organizations like eNACSO at a European level, Children’s Charities’ Coalition on Internet Safety (CHIS) in the United Kingdom with its regular Digital Manifesto,<sup>247</sup> Childnet International also in the United Kingdom,<sup>248</sup> Child Focus in Belgium,<sup>249</sup> Protegeles in Spain<sup>250</sup> and many more that help shape debate and influence industry and policy makers. Annually, Safer Internet Day reflects this cohesive approach and has become a significant focal point for raising awareness.<sup>251</sup> Across the region governments are trying to encourage minors to behave responsibly online through awareness campaigns both in schools and at home through television, radio, print media and the Internet. The ‘You Decide’ campaign in Norway<sup>252</sup> and the “Altes Passwort?” campaign in Luxembourg<sup>253</sup> are key examples. Increasingly countries across the region are partnering with industry to commit to safer mobile use, particularly in relation to Internet usage.<sup>254</sup>

Luxembourg: CASES (Cyberworld Awareness & Security Enhancement Structure) gave away 45,000 toothbrushes in 2010 as part of their “Altes Passwort?” campaign. The campaign encouraged users to think about their passwords like their toothbrushes: not to share them, to choose them carefully, and to change them regularly.<sup>255</sup>

Legislation is primarily focused on the sexual exploitation of children and abuse. It also extends to cover issues of fraud and violation of privacy, including hacking. Countries are also training law enforcement officers and judicial staff on how to deal with technology related crimes as in Georgia.<sup>256</sup> Slovenia,<sup>257</sup> Serbia,<sup>258</sup> Croatia<sup>259</sup> and many others across the region are moving towards more practices of e-government which requires increased efforts to protect user privacy and personal information. Unfortunately, not all countries are at the same level in terms of Internet protection; Russia is one of the only countries in the developing world where possession of child pornography is not illegal.

UK: The UK Council for Child Internet Safety (UKCCIS) was created in 2008 in response to Professor Tanya Byron’s report, *Safer Children in a Digital World*. It brings together government, industry, law enforcement, charities, parenting groups and other interested parties – the first organization of its kind.

## Research

This region is unusual in that there is cross-regional research that has been completed on the risks and usage patterns of children online. The EU Kids Online project profiled earlier is a key source of information on children’s usage across 25 EU Member States.<sup>260</sup> *Towards a safer use of the Internet for children in the EU – a parents’ perspective* looked at parental responses to questions about Internet safety and perceptions of risk.<sup>261</sup> *Education on Online Safety in Schools in Europe* includes information about how online safety is taught in schools in 30 European countries.<sup>262</sup>

The average age of first Internet use is seven in Denmark and Sweden and eight in several Northern European countries. Across all countries, one third of 9-10 year olds who use the Internet go online daily, this rising to 80% of 15-16 year olds.<sup>263</sup>

Parents were most worried that their child could become a victim of online grooming (60%); other concerns were that their child could be bullied online by other children (54%) or bullied by others over a mobile phone link (49%).<sup>264</sup>

## Increasing Access

A major goal across the entire region is an increase in high-speed broadband coverage. In Southern and Eastern Europe establishing access requires work to improve infrastructures and reach rural areas. Some countries are proving innovative in ensuring coverage like Macedonia, the world's first wireless broadband country by 2007.<sup>265</sup>

One particularly interesting development is the promotion of the Internet as a human right. Whether Internet access should be thus considered is a subject which has received much attention over the last few years, with the United Nations' Special Rapporteur on the promotion and protection of the right to freedom of opinion and expression releasing a report in June of 2011, recommending that it should be considered as such.<sup>266</sup>

**Estonia: Estonia passed its Telecommunications Act in 2000 which declared Internet access to be a human right by adding it to the list of Universal Services, to be made available to anyone, regardless of their location within the country.<sup>267</sup>**

In 2001, the Constitution of Greece was amended, inserting Article 5a which states that all persons have the right to participate in the Information Society.<sup>268</sup> The European Union passed Directive 2002/22/EC in 2002, adding "functional Internet access" to the list of universal services which Member States should provide to users at fixed locations.<sup>269</sup> The 2010 Digital Agenda for Europe states that the EU "aims to bring basic broadband to all Europeans by 2013 and to ensure that, by 2020, all

Europeans have access to much higher internet speeds of above 30 Mbps and 50% or more of European households subscribe to internet access above 100 Mbps".<sup>270</sup>

In 2009, Finland passed legislation which required all ISPs to provide broadband access with a minimum speed of 1 Mbps, at a reasonable price, to all permanent homes and businesses.<sup>271</sup> In the same year, France's Constitutional Council effectively made the same declaration when it ruled that the withdrawal of Internet access from those believed to be illegally downloading copyrighted content was in breach of the country's constitution.<sup>272</sup> The most recent European country to effectively declare Internet access as a human right (by adding it to its list of Universal Services in Act 2/11 of March 4, 2011 Sustainable Economy) was Spain.<sup>273</sup> As with Finland, minimum broadband speeds of 1 Mbps will have to be provided by the country's ISPs.

## Education

Countries throughout Europe are increasing the integration of ICT in education as a way of bridging the digital divide and improving work force competition. In countries with higher instances of poverty, ICT is seen as a crucial way to help improve the life chances of citizens. Training of teachers is a crucial step in the evolution of ICT integration in countries. European Schoolnet (EUN) provides a range of resources for teachers through its Learning Resource Exchange.<sup>274</sup> Resources are presented in several languages and cover the majority of Internet safety and IT security topics. Teachtoday is an excellent example of how industry is working with the education sector throughout Europe to improve ICT education.<sup>275</sup> The program provides information and advice for teachers, head teachers, governors and other members of the school workforce about the positive, responsible and safe use of new technologies.



Iceland: SAFT (the country's awareness node for Internet safety) supplied three story books to all pre-schools and elementary schools in Iceland during 2010 in order to promote the safe use of new media. The books were aimed at children between the ages of five and nine and covered not only Internet safety but also online gaming and social networking.

## Innovation

The Council of Europe has deployed an excellent tool for child Internet safety called the Wild Web Woods which is an online game designed to teach children about Internet safety in a fun and exciting fairy tale environment. Aimed predominantly at children between seven and ten years of age, the game currently exists in twenty languages, with more in preparation.<sup>276</sup>

## Case Study - Slovakia

Slovakia has a population of around 5,477,000<sup>277</sup> people and in 2006 the country was significantly lagging behind other European countries in terms of Internet connections at home.<sup>278</sup> The country has its own Insafe Awareness Center, eSlovensko, which operates nationally, providing information aimed at all areas of the community.<sup>279</sup> Its OVCE.sk campaign gained special recognition in the "Cities for Children" award.<sup>280</sup> Children have been taught about Internet safety in schools since the 2007/8 school year. This is achieved through a partnership with Microsoft, as well as with support in the form of educational materials from the EU Safer Internet Centre.<sup>281</sup> Slovakian citizens can access four different websites in their own language, providing the means to report suspected illegal content and receive Internet safety information, including via telephone to the country's Helpline.

The government has partnered with corporate entities such as Microsoft to support and train teachers in order to enable them to utilize ICT effectively in the classroom.<sup>282</sup> Further corporate engagement in Internet safety has been demonstrated by the country's mobile operators, who have committed to a Code of Conduct which (among other things) allows the blocking of adult content on their portals and easy opt-out methods.<sup>283</sup> The Code of Conduct also includes third-party content, not just that provided from the operators. Overall, in five years, Slovakia has become a more connected country, providing a safer online experience for its young digital citizens, as well as for its community as a whole.





## Middle East



### Key Figures

Population: 216,258,843<sup>284</sup>

Internet Users: 72,497,466, 33.5% Penetration<sup>285</sup>

Facebook Subscribers: 16,125,180, 7.5% Penetration<sup>286</sup>

Mobile Subscribers: 314,987,075 – Q2 2011<sup>287</sup>



## Online Safety Overview

Country-level filtering of adult content and ISP oversight is used commonly throughout the region for online safety purposes as well as to restrict the content citizens can access.<sup>288</sup> Some countries in the region are more progressive about Internet safety and online responsibility, providing some awareness campaigns and websites for accessing information. Qatar launched the 'On the Internet, Your Privacy is Your Responsibility' media campaign which appeared in cinemas, on television and on the radio.<sup>289</sup>

Bahrain conducted its first ever review of Internet safety in its *State of the Nation Review of Internet Safety 2010*, allowing the government to assess the issues facing residents and to plan strategy in response to the findings and recommendations.<sup>290</sup>

- 75% of respondents had added people they had never met to their social network friend lists. 43% of respondents had met up with someone with whom they had only interacted online.<sup>291</sup>

Jordan has implemented sentencing and fines for technology-related crimes such as hacking and the spread of viruses.<sup>292</sup> Saudi Arabia is making efforts to tackle the problem of women being blackmailed online as part of the government's cybercrime unit.<sup>293</sup> Images taken from women's social networking sites are being used as leverage to blackmail Arab women into giving money or engaging in sexual activities.<sup>294</sup> Israel stands out in this region for its legislation which makes all depictions of child pornography illegal regardless of whether images are drawings, composites or actual photographs.<sup>295</sup>

## Research

Research on Internet safety and technology usage in this region is limited, but there have been a few key surveys, the findings of which are highlighted in this section. Research also tends to include both Middle Eastern and North

African countries. *Media Consumption and Habits of MENA Internet Users* looks at media consumption and Internet usage in the region, and does not specifically target children, but 29% of the 2,500 respondents do fall in the 15 – 20 year-old range.<sup>296</sup> The survey gives some detail about the nature of activities undertaken by respondents and splits along gender lines. *Women & Mobile: A Global Opportunity. A study on the mobile phone gender gap in low and middle-income countries* also looks at mobile use among women and provides some insight into the region.<sup>297</sup> *Internet Media Use & Public Opinion* provides the best coverage of the region and includes young people aged 15 to 24, but was primarily examining how users access the news.<sup>298</sup> While more in-depth research into the Internet usage of children in the region as a whole is needed, there have been useful country-specific studies. A survey of young people at universities and high schools in Jordan, Lebanon and the United Arab Emirates provides an interesting perspective on the views of young people in the region with regard to Internet safety.<sup>299</sup>

46% of respondents agreed with the statement that "the Internet threatens my privacy".<sup>300</sup>

## Increasing Access

Access to the Internet is a big issue in the Middle East. Countries like Oman are working with industry to establish digital centres where students can access computers and learn about the Internet.<sup>301</sup> Open source software is being developed in Iran as an alternative to foreign products.<sup>302</sup> As access increases it also alters expectations of individuals as they get information about the resources that exist. Young people's usage of social networking and Twitter played a significant part in coordinating their protests and acting as a medium of self-expression.<sup>303</sup>

## Education

Across the region, governments believe strongly in the role of ICT to build a competitive knowledge-based economy which can be seen in the programs of countries like Lebanon.<sup>304</sup> Models of private and public sector cooperation in the development of education programs are also increasing such as Jordan's REACH initiative.<sup>305</sup> Countries are also beginning to increase their programs for teacher training to better integrate ICT programs into the education space

Israel: Israel's Ministry of Education has produced a significant amount of resources for teachers, including training programs, advice and lesson plans, to enable the teaching of Internet safety issues and particularly the ethical use of the Internet in schools.<sup>306</sup>

## Innovation

Women in Technology (WIT) for the Middle East and North Africa was funded by the Middle East Partnership Initiative (MEPI) of the U.S. Department of State, managed by the Institute of International Education (IIE) West Coast Center and Microsoft and was implemented in collaboration with local partners in nine countries: Bahrain, Iraq, Jordan, Lebanon, Morocco, Oman, Saudi Arabia, UAE and Yemen.<sup>307</sup> Since its launch in 2005, WIT has trained over 11,000 women and built the capacity of nearly 60 local women's organizations in the Middle East. It is significant as an organization promoting the training of women in the use of ICT throughout the Middle East region. The training given is then used to benefit women's organizations which has a positive effect in terms of reach, such as in the fields of domestic violence and education.

## Case Study - Qatar

Qatar is a well-connected country in digital terms, with an Internet penetration rate of 66.5%<sup>308</sup> for its population of around 848,000<sup>309</sup> citizens. Its approach both to ICT in general and to online safety in particular is probably the most visible and progressive of all the states in the Gulf region.

At a government level, ictQATAR is responsible for leading the nation's strategic thinking and implementation of ICT initiatives in government, education and online security. It has run a series of Internet safety campaigns, broadcasting safety message in cinemas, on the radio and on television.<sup>310</sup> Its website also provides clear advice to parents on the filtering software options available to them, as well as stressing that software is not a substitute for parental involvement.

Safe Space is ictQATAR's online safety website and contains information for all areas of the community, from model Acceptable Use policies for schools, to interactive games designed to engage children.<sup>311</sup> Safety messages extend into schools, with ictQATAR and Q-CERT (the country's Computer Emergency Response Team) holding awareness-raising workshops aimed at teaching professionals.<sup>312</sup> An Internet safety curriculum is in development, with the aim that both students and teachers will learn to use the Internet safely in order to enhance the educational process. In addition to the online safety efforts within the country, ictQATAR released Qatar's National ICT Plan to 2015 in June of 2011.<sup>313</sup> Targets include increasing broadband speeds across the nation and increasing digital literacy. An ambitious minimum broadband speed of 50 Mbps by 2030 was announced in April 2011.<sup>314</sup>





## Oceania



### Key Figures

Population: 27,630,000<sup>315</sup>

Internet Users: 21,293,830, 60.1% Penetration<sup>316</sup>

Facebook Subscribers: 12,881,560, 36.4% Penetration<sup>317</sup>

Mobile Subscribers: 2,810,898,550 – Q2 2011 (Asia and Pacific region)<sup>318</sup>



## Online Safety Overview

The Australian federal government operates the Cybersmart website which provides information on a range of safety topics as well as access to an online helpline.<sup>319</sup> In addition to awareness campaigns, schools provide education programs for students and professional development for teachers. New Zealand is working on strong preventative measure such as the Digital Child Exploitation Filtering System, which blocks websites that host images of child sexual abuse to all ISPs.<sup>320</sup> Anyone trying to access the sites will get an error message saying the site is blocked due to illegal activities.<sup>321</sup> Online safety is not yet being addressed by other, less affluent, countries in the region, such as Niue or the Solomon Islands, as many are still creating systems for basic access and digital literacy.

**New Zealand:** This country takes a collaborative approach to online safety incorporating views from across sectors. The non-profit, NetSafe, is a center for this collaboration with partners from government, education, law, industry, local communities, parents, caregivers and young people.<sup>322</sup>

Australia and New Zealand have a wide range of legislation dealing with the prosecution of online safety crimes including grooming, child pornography, and the distribution of spam. New Zealand's ISPs have signed a Code of Conduct<sup>323</sup> directing their actions on protection of children from objectionable material, providing safe online usage education, and protecting rights to free speech and access. In the other countries in the region, legislation related to online usage is just beginning to emerge as usage increases. Some of the other islands are beginning to establish their own codes of conduct with ISPs; the main ISP in Niue prevents usage of the network to distribute illegal material.<sup>324</sup>

**Australia:** The national scheme for classification of media, in operation since the 1980s, extends to online content.<sup>325</sup> The Australian Communications and Media Authority (ACMA) offers a hotline<sup>326</sup> for reporting of media which should have restricted access or should be removed including child abuse material.

## Research

Research in this region has almost exclusively looked at Australia or New Zealand with some international comparisons. Much of the existing research looks at children's and young people's online usage. The Australian Communications and Media Authority (ACMA) produced a number of reports on measures being used to reduce online risks as well as examinations of children's media usage and young people's engagement with social media.<sup>327</sup> *The Internet in New Zealand 2009* is an update on earlier reports that looked at usage habits across New Zealand for individuals aged sixteen; the new report expanded to look at respondents aged twelve and over.<sup>328</sup> *New Zealand eGeneration Study* explores the way young people interact with the Internet and other new technology, their access and attitudes to these technologies.<sup>329</sup> *Seen and Heard: Children's Media Use, Exposure, and Response* presents the results from a face-to-face survey of children in New Zealand looking at their media usage is also available.<sup>330</sup>

In Australia, Internet access was available in more than 65% of households with 3 – 4 year olds, increasing to more than 72% of homes with 7 – 8 year olds, 87% of homes with 8 – 11 year olds, and more than 90% of households with 12 – 17 year olds.<sup>331</sup>

In New Zealand, approximately 60% of respondents of all ethnicities and locations had set rules about children's use of computers under parental control.<sup>332</sup>

Issue-specific research is also done on the usage of social networking sites to groom children and the emergence of cyberbullying. *Beyond the Fear of Cyber Strangers* provides an overview of the benefits and risks of online interactions for youth including a discussion of the psychosocial effects of online grooming practices.<sup>333</sup> *High-Wire Act. Cyber-Safety and the Young* presents survey results conducted on young people in Australia and their experiences of cyberbullying.<sup>334</sup>

## Increasing Access

The extension of fiber optic cables has improved access to some of the region.<sup>335</sup> Satellite and solar technology are still used, however, to reach isolated areas like the Solomon Islands.<sup>336</sup> New Zealand's Broadband Investment Fund will

provide high speed access to businesses in city centers as well as extend broadband to underserved regions.<sup>337</sup> The state and territorial level governments in Australia have a number of programs to extend regular access to children such as the state of Victoria's plan to lease computers to students.<sup>338</sup> The program is an effort to extend affordable technology to lower socio-economic areas.<sup>339</sup>

**Solomon Islands: The People First Network (PFNET)** is working in the Solomon Islands to build a wireless communication network that would reach the more rural and deprived parts of the islands through e-mail stations in remote areas running on solar energy. The program has also established an Internet cafe in the capital Honiara which provides ICT education to the general public.<sup>340</sup>

## Education

A number of the smaller islands are still putting a great deal of focus into improving basic education and not yet ICT education which is one of the key aims of the PRIDE Project.<sup>341</sup> In countries where ICT is beginning to be introduced, lack of sufficient resources and barriers to access are the major impediments to full integration. Australia<sup>342</sup> and New Zealand have well-developed ICT education curricula which include modules on cyber-safety education. Teachers have access to a broad range of resources and training opportunities in New Zealand and in the individual Australian states and territories. Papua New Guinea is unique in its efforts to really drive forward ICT and in 2008 a group of five teachers created the country's first syllabus for ICT education for secondary schools, which included lessons on Internet safety.<sup>343</sup>

**Niue:** In 2003, Niue became the first nation in the world to enjoy free island-wide wireless Internet access.<sup>344</sup> It will also be one of the first countries to have a laptop in every primary and secondary school as a result of the One Laptop Child initiative launched by the Massachusetts Institute of Technology Media Lab.<sup>345</sup>

## Innovation

SuperClubsPlus Australia is currently trialing an actively protected, social learning network for young children aged from six to twelve years, centered on ICT literacy and citizenship, which will allow students to chat and collaborate in a protected environment online.<sup>346</sup>

### Case Study – The PRIDE Project

The PRIDE Project (Pacific Regional Initiatives for the Delivery of basic Education) ran from 2003 to the end of 2010 and sought to improve the quality of basic education in its fifteen Pacific member nations.<sup>347</sup> Implemented by the Institute of Education at the University of the South Pacific (USP) and jointly funded by the EU and NZAid, the project assisted countries in implementing, monitoring and evaluating their strategic educational plans. The program also worked with each Ministry of Education (or equivalent) to deliver quality basic education at national and regional levels.

The project's objective was to assist Ministries of Education in formulating strategic plans for education through wide consultation with all stakeholders, including, teachers, parents, pupils, community and private sector groups. The project also encouraged collaboration between nations and the sharing of best practice.

Over the course of the project, a range of publications were released, including *Developing Pacific Knowledge Societies*.<sup>348</sup> This publication describes in depth the challenges faced by the Pacific island nations in integrating ICT into their school systems and makes recommendations as to the way forward for government policies. It also gives a picture of how access to the information enabled by the Internet has had a positive impact on children.

“Students have become more confident in expressing themselves and they have improved their writing skills, while teachers say they can provide quicker and more accurate feedback to students.”  
– The PRIDE Project<sup>349</sup>

In addition to the primary focus of the program, individual nations were able to apply for funding for sub-projects: often fairly small initiatives which would have a much larger local impact. One such sub-project was The ‘Majuro School Enrichment Programme’ in the Marshall Islands (population 67,182)<sup>350</sup> which involved an IT component.<sup>351</sup> A computer lab was built and a teacher was employed to teach both staff and children ICT skills. Demonstrating how new technologies have benefited communities, the program uses a Facebook page to communicate with stakeholders and activities are both regular and ongoing.<sup>352</sup>





# Africa



## Key Figures

Population: 1,037,524,058<sup>353</sup>

Internet Users: 118,848,060, 11.5% Penetration<sup>354</sup>

Facebook Subscribers: 30,665,460, 3.0% Penetration<sup>355</sup>

Mobile Subscribers: 595,023,646<sup>356</sup>



## Online Safety Overview

The Arab Information and Communication Technologies Organization (AICTO) is an important organization in the area which works to promote common strategies, policies and best practice for ICT development throughout the Arab region. The Internet Governance Forum was convened in Kenya and it marked the first time it had ever been held in sub-Saharan Africa.<sup>357</sup> Countries in this region partner heavily with non-profits and the philanthropic arm of major companies in order to provide programs that can improve access, integrate ICT in schools and promote cyber safety.

Filtering at Internet cafes as well as tracking of client usage was heavily used in Tunisia and across North Africa.<sup>358</sup> Specific legislation regarding child pornography is also beginning to appear in countries like the Democratic Republic of the Congo which includes simulated images of children.<sup>359</sup> Legislation has been proposed in South Africa to include the use of mobile phone technology and its role in the distribution of child pornography. There is also a movement to engage young people in the fight to end cybercrime in the region. Fraud and hacking has been a particular issue for countries like Ghana and Nigeria,<sup>360</sup> leading to legislation dealing to tackle these issues. Both Ghana and Nigeria have partnered with Microsoft to increase young people's engagement in issues of cybercrime.<sup>361</sup>

**Nigeria: Microsoft Nigeria partnered with Paradigm Initiative Nigeria (PIN) in 2008 to launch the Microsoft Internet Safety, Security & Privacy Initiative for Nigeria, or MISSPIN. The project aims to teach safe behaviors to young people and to encourage them to turn away from cybercrime, teaching them that they can use technology and the Internet to make money legally. A song, promoting this message, was released in February 2010.<sup>362</sup>**

## Research

North Africa and the Middle East have been included in the *Media Consumption and Habits of MENA Internet Users*<sup>363</sup> and *Women & Mobile: A study on the mobile phone gender gap in low and middle-income countries*,<sup>364</sup> which was discussed in the Middle East section. Research on all of Africa is very limited on Internet usage and safety issues related to children, however, some interesting

work is being done on the use mobile phone technology. *Mobile Africa Report 2011. Regional Hubs of Excellence & Innovation* examines all aspects of mobile use in Africa, from subscriber numbers and predicted increases to mobile payment, Internet access on such devices and how communities are using them in innovative ways as alternatives to other ICT equipment.<sup>365</sup> Research ICT Africa (RIA) conducted a survey from June to August 2011 which looked at mobile ownership and Internet access in Namibia which provides some insight into regional usage.<sup>366</sup>

**In Namibia, 13.4% of respondents aged fifteen or older used the Internet in 2011. Of those, 37.9% first accessed the Internet using a mobile phone. Internet users were asked how they had accessed the Internet over the last twelve months and 55.9% of respondents had accessed it using a mobile phone.<sup>367</sup>**

## Increasing Access

Fixed line infrastructures are an issue for some countries and mobile phone companies provide some of the coverage as in Tanzania.<sup>368</sup> Vodacom helped Tanzania to become the second country in Africa with a HSDPA Mobile Broadband network.<sup>369</sup> Data from 2009 shows that there are one and a half mobile phones for every person in South Africa as many people own multiple SIM cards to avoid high interconnection costs.<sup>370</sup> Tunisia is exceptional in that it has 100% Internet connectivity for its education sector making it one of the most developed telecommunications infrastructures in the region.<sup>371</sup> The expansion of access through underwater cables is slowly improving access for the East coast of Africa but countries like Kenya are first working to fix infrastructural issues.<sup>372</sup> Alternative systems for rural access are appearing such as the use of solar energy to run computers in Laytonde in Uganda.<sup>373</sup>

**Rwanda: The ICT Bus Project is an initiative implemented by the Rwanda Information Technology Authority (RITA) through the eRwanda Project. Launched in 2008, its main objective is to help bridge the digital divide affecting the rural populations of the country. With the help of this mobile computer lab, training can be provided to rural people including school children and teachers, and the use of ICT as a tool for innovation, competitiveness, productivity and efficiency will be encouraged, thus benefitting**

students, youth groups, traders, farmers and other rurally-based citizens.

## Education

Countries like Uganda,<sup>374</sup> Mozambique,<sup>375</sup> Ghana<sup>376</sup> and others across the region have put a lot of emphasis on the value of ICT education and the role it can play in enhancing the economy, particularly in the creation of a service industry. The infrastructure and access problems have inhibited the growth of ICT to a degree, but governments in the region are closely partnering with charities to find solutions. The New Partnership for Africa Development (NEPAD) works to bridge the digital divide between Africa and the developed world.<sup>377</sup> One of their projects is the e-Schools program which integrates ICT into the curriculum to improve access, quality and equity in education. South Africa provides Internet safety education in grades ten and twelve and has put in efforts to improve digital literacy.<sup>378</sup>

**South Africa:** The South African Department of Education hosts the educational portal, Thutong (which means 'place of learning' in Setswana).<sup>379</sup> The portal offers a range of materials and includes an area dedicated to child online safety for principals, teachers, parents and guardians. Users are invited to share their strategies on how they protect their children without compromising access to information. Teachers can also find approved resources suggesting how to educate pupils about Internet safety.<sup>380</sup>

## Innovation

The Grapho Learning Project, developed in Finland, aims to help children around the world to learn to read in their local languages through the help of technology.<sup>381</sup> Reading material is made available digitally on mobile devices and computers, often free of charge and in partnership with governments and non-profits. Two languages are available for use in Zambia for the project's GraphoGame, a method of teaching children basic letter sounds using the synthetic phonics approach.<sup>382</sup>

Kibera is the largest slum in Africa and houses one million people in Nairobi, Kenya.<sup>383</sup> Prior to October 2009, Kibera did not appear on any maps and the Map Kibera project trained thirteen young people to use GPS devices to map facilities such as toilets, street lighting and clinics.<sup>384</sup> The young people involved in the project also received training

in how to use technology, providing them with transferable skills for the future. The mapping project identifies safe areas and crime hotspots, including areas of child abuse.<sup>385</sup>

## Case Study - Zambia

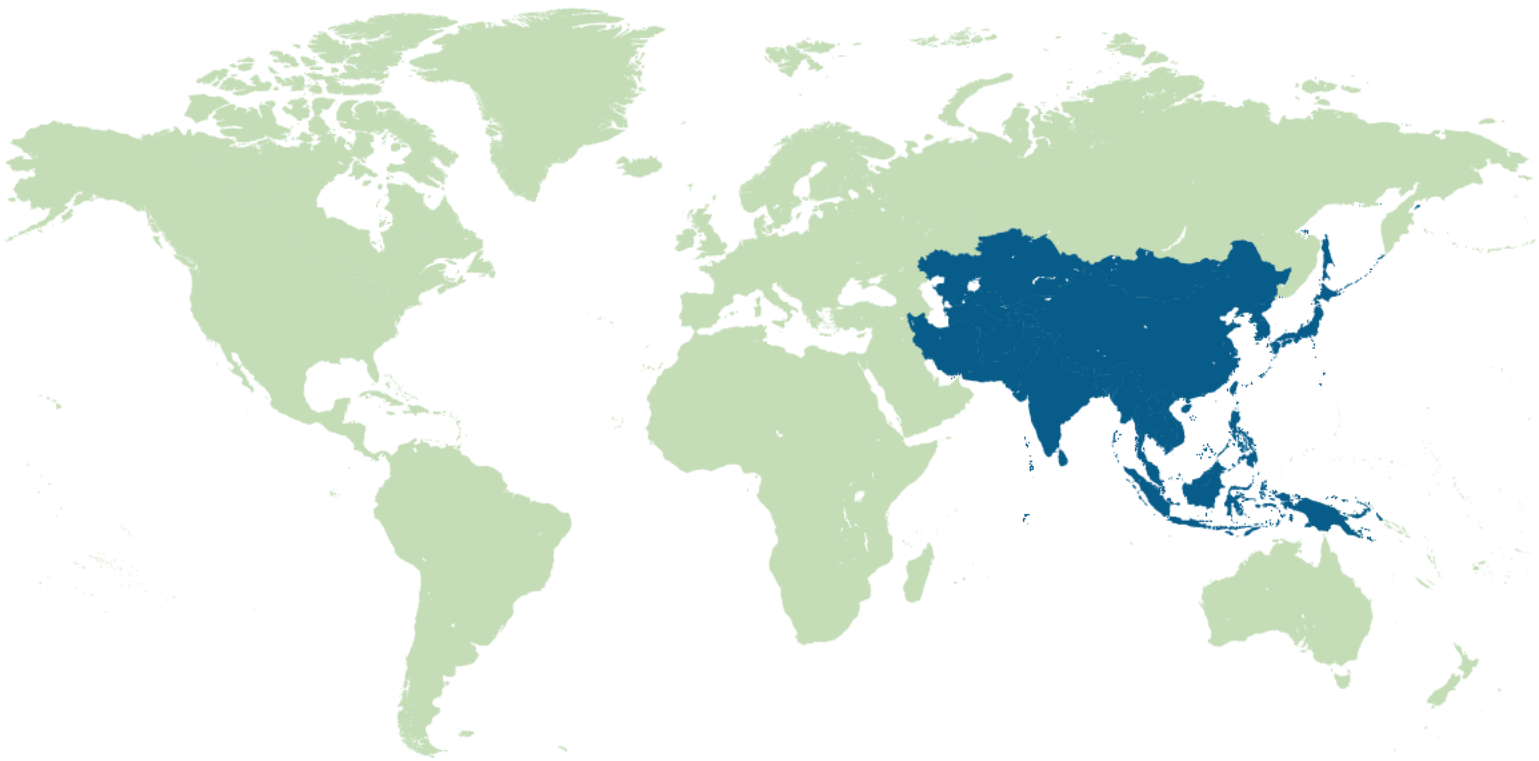
Zambia has a population of around 13,881,000<sup>386</sup> and Internet penetration is only at 5.9%,<sup>387</sup> yet where ICT is being introduced to schools, Internet safety messages are included at the earliest stages. As is common in the region, the government and non-profits often work together to introduce technology. An example of this is the Computers for Zambia Schools Trust, which operates as a partnership between Computers for African Schools, which is a UK-based registered charity, the British Council, HSBC, the Beit Trust, SchoolNet Zambia, MTN, ZamNet, and the Zambian Ministry of Education.<sup>388</sup> To date the project has distributed 5,000 computers to over 400 schools countrywide, and trained 300 teachers.

Another initiative is the iSchool project, which was devised and implemented by AfriConnect Zambia, in collaboration with local partners and the Ministry of Education. The aim of the iSchool project is to empower Zambian schoolchildren, their parents, and communities through access to worldwide information and education. The main objective of the project is to provide schools with sustainable Internet connectivity, computers and learning materials, thereby improving the quality of education delivery. The project supplies selected schools with computer equipment and the infrastructure to support it; high-speed broadband Internet connectivity; training in the academic use of the Internet, and technical trouble-shooting skills and an educational website which contains resources based on the Zambian curriculum, online modules for self-directed study and websites so that schools can promote themselves to a global audience.<sup>389</sup> Among the resources provided to users of the iSchool project, are links to Internet safety, netiquette and privacy advice for children, as well as information on Internet safety aimed at parents.<sup>390</sup>





# Asia



## Key Figures

Population: 3,879,740,877<sup>391</sup>

Internet Users: 932,393,209, 24.0% Penetration<sup>392</sup>

Facebook Subscribers: 152,957,480, 3.9% Penetration<sup>393</sup>

Mobile Subscribers: 2,810,898,550 – Q2 2011 (Asia and Pacific region)<sup>394</sup>



## Online Safety Overview

Internet safety in this region is often referred to as ‘cyber-wellness’: “Cyber-wellness refers to the positive well-being of Internet users and a healthy cyber culture for the Internet community.”<sup>395</sup> A number of governments in the region have extensive filtering software, such as Singapore, which blocks harmful content in schools and Internet cafes. In some countries this filtering is used to control content that is considered objectionable for religious reasons, like Indonesia, or considered politically subversive to the regime in power, like China. Countries with higher levels of Internet access have developed hotlines for reporting illegal content and offer guidelines on Internet safety. Digital awareness campaigns have been launched throughout the region and are highly innovative in the way they attempt to reach parents and children. In South Korea, children are taught about responsible and safe use of the Internet, as well as netiquette, in schools from the second grade. Netiquette is taught in the form of a song, stressing the importance of good manners and online accountability.<sup>396</sup>

**Singapore: The Media Development Authority (MDA) ran a series of cartoons to educate children on specific online safety issues: cyberbullying, gaming addiction, information sharing on social network sites.<sup>397</sup>**

Child pornography and abuse are a serious concern in this region. Countries like Indonesia provide protection for those who discover child pornography<sup>398</sup> and in Sri Lanka reporting is compulsory for individuals who discover it as part of their jobs.<sup>399</sup> Japan is unusual in that possession of child pornography is not illegal and until recently, depictions that did not show an actual child were not considered illegal either. This led to the creation of an entire genre of graphic novel-style pornography, known as hentai and sub-genres such as the young girl-focused, Lolicon.<sup>400</sup> In prosecution of cybercrimes Taiwan is also unusual by allowing short rehabilitation sentences for convictions related to possession of child pornography.<sup>401</sup> Indonesia has classified defamation as a criminal rather than a civil crime. Compensated dating is also acknowledged as an issue throughout the region, made easier by the use of the Internet, and countries like Hong Kong and Taiwan are working to end the practices.<sup>402</sup>

**South Korea: Gaming and Internet addiction are also appearing as high-speed access becomes more prominent. The government has established Internet rescue camps to combat addiction and has imposed curfews on some of the most popular online games,<sup>403</sup> as has Thailand.<sup>404</sup>**

## Research

Select studies have looked at children’s online usage in the region, however, there are only a limited number of studies and they are country-specific. Yahoo!’s Net Index 2010 was created in conjunction with TNS (Kantar Media), Nielsen and Synovate and looks at Internet usage in Vietnam, Indonesia, the Philippines, and Malaysia.<sup>405</sup> Research looks primarily at adult usage with some attention to children’s usage. A report by the GSMA explores the usage of mobile devices in developing countries and the benefits provided as an alternative to traditional learning.<sup>406</sup> The GSMA also released another report in conjunction with NTTDoCoMo (a Japanese mobile operator) which looks at children’s usage patterns in select Asian countries.<sup>407</sup>

**Mobile phone usage is growing rapidly across the region as is the use of mobile devices to access the Internet. In Vietnam, usage almost doubled from 10% in 2008 to 19% in 2009.<sup>408</sup>**

**In South Korea, by the age of thirteen, nearly 90% of children own a mobile phone.<sup>409</sup>**

## Increasing Access

Rapid growth in Internet access, particularly through mobile devices, belies the fact that many countries in the region still have to overcome major barriers of poverty and poor infrastructure to increase access. The region is split between countries, like Malaysia,<sup>410</sup> struggling to get basic access beyond their urban centers and those that are working to update existing systems to include full fiber optic broadband and wireless capabilities, like Taiwan.<sup>411</sup> Cybercafes are important both in poorer and wealthier regions: they are used as cheap access in poorer areas and are the centers of social gaming in more affluent areas. Rural areas, such as those in Sri Lanka,<sup>412</sup> are seeing the creation of access centers for ICT information and Internet access similar to those utilized in Africa, the Middle East, and the Caribbean.

**Sri Lanka:** *Nenasalas*, which are small knowledge shops, provide Internet access even in remote areas.<sup>413</sup>

Mobile Internet access has been a major contributor to Internet access growth and has led to higher usage of social networking sites in Asia among 15 – 24 year olds.<sup>414</sup> Mobile phone access is prominent in regions where broadband technology is not yet available. India is working to improve the gender gap on mobile phone usage including the launch of the campaign, 'My Mobile, My Companion' to increase women's usage for education and health purposes.<sup>415</sup>

**Taiwan:** The government is working to provide affordable wireless access that will bridge the digital divide.<sup>416</sup> The city of Taipei now has the world's largest Wi-Fi coverage, providing Internet access from anywhere in the city.<sup>417</sup>

## Education

Countries that are restricted by long-term conflicts or poverty, like Laos, are trying to alter their economies with the use of digital technologies.<sup>418</sup> There is heavy non-profit involvement in this area and the region is notable for its efforts to integrate imaginative approaches to ICT education. Malaysia's Smart Schools aim to encourage more student-centric education where teaching tools are varied and multimedia is utilized, rather than textbooks.<sup>419</sup> In addition to access in schools, some countries have established programs to ensure resources are available at home, for the poorest and brightest students. Hong Kong's Intelligent Fibre Kids program provides low-income families with free broadband for 24 months.<sup>420</sup>

**Philippines:** The text2teach program in the Philippines creates integration between mobile phone technology and classrooms where students in grades 5 and 6 use mobile phones to choose educational videos and text their selections which are delivered instantly.<sup>421</sup>

## Innovation

In Bangladesh the mobile operator Grameenphone offers Information Boats to reach remote areas on a fixed schedule.<sup>422</sup> The boats provide education on the value of the Internet and computer access, and allow residents to access education materials for their children, download music and print photos.

UNESCO Bangkok is at the forefront of non-profit efforts to integrate computers and other technologies into schools. They launched the innovative Next Generation of Teachers (Next Gen) project which builds teacher understanding of digital tools. The SchoolNet project is also a UNESCO initiative which improves Internet connections in schools and helps to create a network of schools throughout the region.<sup>423</sup>

## Case Study – Cambodia

In the last ten years, much investment has been injected into technology education provision and training.<sup>424</sup> The country's 'National ICT Policy 2015' aims to help transform Cambodia into a knowledge economy and includes a range of goals from establishing legal and regulatory frameworks to reducing global warming through the use of ICT.<sup>425</sup>

An enormous amount of work is being done to bring digital technology into classrooms across the country, with efforts coming from all sectors: Government, corporate and non-profit. In fact, Cambodia could be considered the birthplace of the One Laptop Per Child Initiative, since founding a rural (IT-equipped) school in conjunction with the non-profit organization, American Assistance for Cambodia, inspired Nicholas Negroponte to expand the idea for global benefit.<sup>426</sup>

Challenges such as the lack of infrastructure in some rural areas require innovative solutions. The rural schools mentioned previously, are equipped with computers with Internet access, in addition to a trained ICT teacher and appropriate software for educational use.<sup>427</sup> A system known as 'Motoman' uses a motorbike to power a mobile access point and satellite uplink, enabling access to the Internet and non real-time search engines in the Khmer language, providing a far cheaper alternative to the ongoing costs associated with maintaining a satellite and generator.<sup>428</sup>

The drive to ensure that children have access to the Internet has spawned an awareness of the need for safety advice. The Don Bosco Sihanoukville Technical School is proposing to 'create a safe and formative space on the Internet in Cambodia, especially for children, teenagers and young people'.<sup>429</sup> The proposal on its website, from May 2011, invites interested non-profits and officials to join their campaign, aimed at educating Internet users on how to browse the web safely and avoid online dangers.





## Conclusions and Recommendations

The current technology revolution, of which the Internet is a major part, is increasingly global in nature. Previously insurmountable infrastructure issues are being overcome. Countries, communities and citizens are being empowered and connected as never before.

Today's children and young people are among the first generation to only know a digitally connected world. It should come as no surprise, therefore, that the knowledge gap between children and adults makes online safety all the more challenging. Adults are often ill-equipped to provide the guidance and support their children need to make wise choices online.

This report shows us that the way children use technology and the risks they face are remarkably similar around the world. Often the biggest variable is the way adult society in a given country deals with the risks and actual harm. Adult perceptions of risk sometimes bear little relationship to the actual risks and resulting government initiatives are often slow to prevent actual harm. Major variation exists in what aspects of online risk countries focus on and how they decide to build legislation and programs to cope with them. The digital development of countries plays a large part in determining how online safety is handled in both legislation and education.

Despite limited Internet access and infrastructural issues in many regions, it is interesting to note how deeply technology has penetrated even the most remote corners of the world. The exposure of children to this technology poses a difficult policy problem based on the wide range of routes of access and the variety of resources that are available to children when they are online. In the developing world this can be particularly problematic if attention is not paid to the social and cultural context of the countries engaging with this technology. Socio-economic deprivation, poor governance and weak law enforcement accentuate some online risks and safety is often seen as a low priority in some developing countries.

ICT education and the promotion of digital literacy are crucial elements in shaping the way countries instruct children in how to manage online risk. Education about ICT provides a key opportunity to build up children's awareness of safety issues and in many countries this is increasingly paired with government-sponsored awareness campaigns. There have been a truly remarkable number of innovative awareness campaigns and further innovation in this area is essential. Building children's awareness from a young age and integrating it into imaginative schemes is a key way to drive home the themes. Collaborative policy across sectors has also been a crucial element in the successful creation of ICT programs particularly in developing countries. Encouraging a wide range of stakeholders to engage with online safety education is essential to a well-developed digital citizenship programs.

Digital citizenship goes beyond ideals of personal conduct online and includes thought for the impact conduct might have on others.<sup>430</sup> This ideal of digital citizenship must be incorporated into not only children's understanding, but their parents' as well. It is also essential for parents to work with children to set out normative online behaviours. Some preliminary research indicates that parental restrictions play a large part in shaping children's individual tastes concerning online usage. Education and promotion of three literacies (digital, media and social) are essential to ensuring the effective use of parental control technologies.

Overall the lack of research, both qualitative and quantitative, is the single biggest barrier to developing a better understanding of how technology impacts children's lives both positively and negatively. Some of this has been due to the rapid evolution of new technologies particularly in the last two decades. Often even good research becomes quickly out of date as new platforms and content become available. There is however, growing evidence that we are reaching some degree of maturity in terms of the way technology is being used in daily lives. Now is the time to invest in the kind of research that will give us a much better understanding of issues, challenges and opportunities around online safety.



# Key Recommendations

## Evaluate

- Future research needs to look at not only the risks associated with Internet access, but also the benefits and how Internet usage shapes children's development.
- Researchers need also to conduct more research in developing regions to better understand children's usage patterns and online behaviors.
- Research should include more information on parental digital literacy and its effect on children's usage.
- Re-evaluations of current educational curriculums should be conducted with a view to reflecting new 21st century learning and the creative power of new technology in the classroom.

## Innovate

- Online safety programs should be constructed with an awareness of the cultural context of countries; not a 'one size fits all' approach to safety.
- More creative ways must be found to drive forward Internet access in rural areas, with recognition that the barriers are different for each region.
- Stakeholders need to make greater use of technology to find solutions to the challenges of online safety. Social media and collaborative platforms like GRID can increase engagement, understanding and make better use of scarce global resources.

## Collaborate

- More countries should examine the existing best practice and should use those innovative strategies to build effective programs that raise children's online safety awareness from a young age.
- Collaboration is fundamental to delivering effective online safety initiatives. Effective digital citizenship relies on multi-sector collaboration in support of children's digital education and promotion of online safety issues.
- Governments should be encouraged to provide reasonable oversight and support of industry self-regulatory efforts. Non-profits should play a significant role in a multi-stakeholder approach to online safety and the promotion of digital citizenship.



## Appendix: Country Profiles

### North America:

- Canada
  - Provinces: Alberta, Manitoba, Ontario and Quebec
- United Mexican States
- United States of America
  - All 50 States are included

### Central America and the Caribbean:

- Barbados
- Republic of Costa Rica
- Republic of Cuba
- Dominican Republic
- Republic of Guatemala
- Republic of Honduras
- Jamaica
- Commonwealth of Puerto Rico (U.S. territory)
- Republic of Trinidad and Tobago

### South America:

- Argentine Republic
- Federative Republic of Brazil
- Republic of Chile
- Republic of Colombia
- Republic of Ecuador
- Republic of Peru
- Oriental Republic of Uruguay
- Bolivarian Republic of Venezuela

### Europe:

- Republic of Albania
- Principality of Andorra
- Republic of Armenia
- Republic of Austria
- Republic of Azerbaijan
- Republic of Belarus
- Kingdom of Belgium
- Bosnia and Herzegovina
- Republic of Bulgaria
- Republic of Croatia
- Republic of Cyprus
- Czech Republic
- Kingdom of Denmark

- Republic of Estonia
- Republic of Finland
- French Republic
- Georgia
- Federal Republic of Germany
- Hellenic Republic of Greece
- Greenland
- Republic of Hungary
- Republic of Iceland
- Republic of Ireland
- Italian Republic
- Republic of Kazakhstan
- Republic of Kosovo
- Republic of Latvia
- Principality of Liechtenstein
- Republic of Lithuania
- Grand Duchy of Luxembourg
- Republic of Macedonia
- Republic of Malta
- Republic of Moldova
- Principality of Monaco
- Montenegro
- Kingdom of the Netherlands
- Kingdom of Norway
- Republic of Poland
- Portuguese Republic
- Romania
- Russian Federation
- Republic of San Marino
- Republic of Serbia
- Slovak Republic
- Republic of Slovenia
- Kingdom of Spain
- Kingdom of Sweden
- Switzerland
- Republic of Turkey
- Ukraine
- United Kingdom (including devolved governments)
  - Northern Ireland
  - Scotland
  - Wales

**Middle East:**

- Kingdom of Bahrain
- Islamic Republic of Iran
- State of Israel
- Hashemite Kingdom of Jordan
- Lebanese Republic
- Sultanate of Oman
- State of Qatar
- Kingdom of Saudi Arabia
- United Arab Emirates

**Oceania:**

- Commonwealth of Australia
  - All states and territories
- Federated States of Micronesia
- Republic of the Fiji Islands
- Niue
- New Zealand
- Independent State of Papua New Guinea
- Solomon Islands

**Africa:**

- People's Democratic Republic of Algeria
- Republic of Angola
- Democratic Republic of the Congo
- Republic of Côte d'Ivoire
- Arab Republic of Egypt
- Republic of Ghana
- Republic of Kenya
- Republic of Mozambique
- Federal Republic of Nigeria
- Republic of Rwanda
- Republic of Senegal
- Republic of Sierra Leone
- Republic of South Africa
- Republic of Sudan
- Tunisian Republic
- United Republic of Tanzania
- Republic of Uganda
- Republic of Zambia

**Asia:**

- Kingdom of Bangladesh
- Brunei Darussalam
- Union of Burma
- People's Republic of China
  - Hong Kong Special Administrative Region
  - Macau Special Administrative Region
- Kingdom of Cambodia
- Republic of India
- Republic of Indonesia
- Japan
- Lao People's Democratic Republic
- Malaysia
- Mongolia
- Islamic Republic of Pakistan
- Republic of the Philippines
- Republic of Singapore
- Republic of Korea
- Democratic Socialist Republic of Sri Lanka
- Taiwan
- Kingdom of Thailand
- Democratic Republic of Timor-Leste
- Socialist Republic of Vietnam





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