

Brief Glossary of Terms on Communication Law and Information Technology

Angelica Staicu¹, Georgian Dan²

Abstract: Given that the predominant communication is on the Internet and the use of new technologies, the knowledge of common terms in the field, as well as the actual use of these technologies can often become overwhelming. What does Word Wide Web (WWW) mean, URL, source code, object code, software, portal, search engine, peer-to-peer (P2P) networks, web-blog, online credibility, electronic harassment, phishing, cyber violence, hacking, etc.? That is why we intend, in the current document, to clarify some questions regarding the knowledge of the field and the terms used, in order to better understand the virtual phenomenon and its forms of manifestation. We intend to present a short glossary of terms and expressions, with explanations and examples. The documentary material will then be presented to the entire academic community and, in particular, to the students, the priority recipients of the scientific activity.

Keywords: Communication law and information technology; Word Wide Web (W.W.W.); URL; source code; phishing

Word Wide Web (W.W.W.)



Figure 1. Word Wide Web (W.W.W.) Image

Today we cannot imagine the world without the existence of the Internet, the one which gives us instant access to the information and services we need on a daily basis. But things were not always like that. Have you ever wondered what the first web page was and, more than that, what it looked like?⁴

You can find the answer on the page created⁵ by *Tim Berners-Lee* on a NeXT computer in 1991, which is a source of information about the then new and exciting World Wide Web. The current page is

⁴ Victor Rizescu, https://playtech.ro/2012/cum-arata-prima-pagina-web-din-lume/.

¹ Senior Lecturer, PhD, Danubius University of Galati, Romania, Address: 3 Blvd. Galati, Romania, Tel.: +40.372.361.317, Corresponding author: chirila_angelica@univ-danubius.ro.

² Assistant Professor, PhD, Danubius University of Galati, Romania, Address: 3 Blvd. Galati, Romania, Tel.: +40.372.361.317.

³ https://playtech.ro/2012/cum-arata-prima-pagina-web-din-lume/.

⁵ https://www.w3.org/History/19921103-hypertext/hypertext/WWW/TheProject.html.

actually a copy kept by CERN and updated as the WWW project evolved.

Word Wide Web (W.W. w. or short Web), so popular today, is a system for storing and reading documents on the Internet in a format that includes links to other documents, graphics and multimedia elements (photo, audio, video) (Bâzu, 2010, p. 18). Data storage and reading is possible due to hypertext (text containing electronic links to other pages), encoded using HTML (Hypertext Mark-Up Language). This language allows you to display web documents on any computer equipped with software called a web browser. The most popular browsing applications are Microsoft Internet Explorer, Netscape Navigator, Mozzilla or Opera.

Url



Figure 2. Url Image

URL is an acronym: U R L = Uniform Resource Locator. It is a reference (an address) to an Internet resource.

What are the components of an URL?

An URL (a web address) has two main components:

- **Protocol identifier**: "http" or "https";
- **Resource name**: "example.com" or "your-site-url-address.ro".

It should be noted that the two components mentioned above are separated by two dots ":" and by two oblique lines "//".

The protocol identifier indicates the name of the protocol that will be used to obtain the resource, while the resource name is the full address of the resource.

For example, in most cases, to serve hypertext documents, the transfer protocol used is HTTP (more recently HTTPS, an extension of the HTTP protocol, which is a new security standard) 2 .

A URL or link is human-readable text that is designed to replace the numbers (IP addresses) that computers and mobile devices use to communicate with servers.

What is the optimal format for a LINK (URL)?

To ensure that the site (resource) can be accessed correctly by search engine robots, it is recommended that the URL (site link) has the following form:

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¹ https://www.realitatea.net/.

² https://re7consulting.ro/ce-inseamna-adresa-url-a-site-ului/.

https://ceesteurl.(ro)/categorie/subcategorie/cuvant-cheie¹

In short, the scheme is composed of protocol (http or https), www (World Wide Web), name (proper name of each site) and origin (ro-Romania).

Among the most popular endings that can exist on the internet are:

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✓ .com – commercial;
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- \checkmark .org organization;
- ✓ .gov governamental;
- ✓ .edu educational;
- ✓ .mil military.

There are also endings depending on the country of origin:

- ✓ .ro Romania;
- ✓ .au Austria. etc.²

Source Code

The source code of a program is written in one or more programming languages understood by programmers and it is not the same as the machine code that is directly executed by a computer. It is a series of lines of code written most often as plain text and can be organized into one or more files. And it is important to understand that a programmer when programming the computer (namely: when writing the source code) he does not write that code in a language that is directly understood by the computer. In order for a source code written by the programmer to be understood by a computer it must be translated to the computer using a translator. Translators are programs that turn code written by a programmer into instructions that can be executed directly by a computer. Translators can be of two types: compiler or interpreter. To see the difference between the source code and the machine code, two files are run: source code.cs and machine code.exe. The file machine code.exe os the result of the translation³.

```
static void Main(string[] args)
{
   Console.WriteLine("Eu pot sa calculer patratul unui numar.");
   Console.WriteLine("Tasteaza un numar intre 1 si 999: ");
   string numarCaText = Console.ReadLine();
   decimal numar = 0;
   if (decimal.TryParse(numarCaText, out numar))
   {
      Console.WriteLine("Patratul numarului (0) este (1)", numar, numar " numar);
      Console.WriteLine("Aplicatia se va inchide.");
   }
   else
   {
      Console.WriteLine("Nu ati introdus un numar valid. Aplicatia se va inchide.");
   }
   Console.WriteLine("Pentru a reincerca trebuie sa reporniti aplicatia.");
   Console.ReadKey();
}
```

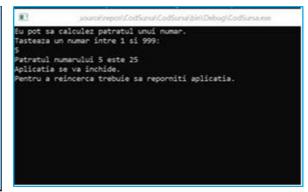


Figure 3. Source Code Written in the Programming Language C#4

Figure 4. Application Resulting from "Translation"⁵

The source code is a fundamental intermediate expression for the execution of the program that represents the translation of some parts of the preparatory conception material into a programming

¹ Idem.

² https://dwf.ro/blog/ce-este-un-url/.

³ https://invatamprogramare.ro/codul-sursa/2020/.

⁴ Idem.

⁵ Idem.

language using the grammar rules of that language. It is not expressed in natural language, having a cryptic aspect for a non-IT professional but coherent for specialists. The source code is one of the most important expressions of a computer program because it contains the details of the program execution and is used by the programmer to modify or further develop the program. It is a secret carefully guarded by most computer software companies. *The source code* is indisputably *protected by copyright and used as evidence, being internationally accepted, to prove the originality of a computer program*¹.

Object Code

As previously shown, the source code is a fundamental intermediate expression of the program that represents the translation of parts of the preparatory design material into a programming language using the grammar rules of that language and is an element protected by Romanian law. The source code is one of the most important expressions of a computer program because it contains the details of the execution of the program and is used by the programmer for the further modification or development of the program. *The object code is the preparatory design material for manuals, application programs, and operating systems.* Proving access to the source code is easy to accomplish, especially for programs marketed on the market².

The components of computer programs are classified by jurisprudence as **literal** (*source code*, *object code*) and **non-literal** (*structure*, *sequence*, *organization*, *as well as other elements determined by the interaction of the code with the hardware and the operating system*); *copyright infringement involves either copying literal or non-literal elements*.

On the other hand, the ideas, processes, methods of operation, mathematical concepts and principles underlying any element of a computer program, including those on which its interferences are based on, may not be subject to copyright.

Computer Program

Computer program (application) - set of instructions that can be executed by a computer system in order to obtain a determined result; - Rule no. 4/2018 on the management of operational risks generated by information systems used by authorized/approved/registered entities, regulated and/or supervised by the Financial Supervisory Authority, ANNEX No. 1 - Definitions and abbreviations, Section 34.

Portal

What is a portal?

A site used as a gateway to the Internet or as a starting/aggregation point for many other online sites and services (from useful information, chat, email to shopping and links)³.

A website that offers a wide range of services and resources, such as email, forum, search engines and virtual stores. For example, www.edemocratie.ro is considered a resource portal for e-democracy and e-government in Romania.

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¹ http://www.euroavocatura.ro/dictionar/334922/Codul_sursa.

² https://www.ct-lawyers.ro/proprietatea-intelectuala-in-cazul-programelor-pe-calculator/.

³ https://www.competentedigitale.ro/internet/internet_portal.php.

What is the difference between a static website and a portal?

A static website is made up of static pages and graphic elements. It's simple, it loads fast and it's cheaper. A portal on the other hand offers many more options: search engine, statistics, backend administration, discussion forum, online forms, chat and other things that can animate your web presence.

Web portals are websites with a larger structure and complexity that can provide a wide range of services, subsuming a wide variety of content and links to other websites. In addition to its activity, a web portal can provide forums, e-shops, search engines, online radio and other options. In general, the structure of a web portal consists of two elements: "front-end" interface with customers and users and "back-end" interface for the administration of all information provided through the portal. A quality portal must contain: a multilevel structured menu, user accounts, interactive forms, search engines, login mode and other options.

These are the types of portals that can be found:

- Regional portal is a portal that contains information from certain geographical regions. Displays weather, local news, announcements, maps, local businesses;
- Corporate portal is an internal portal for a specific company. This type of portal can include workflow management solutions, group collaboration, customer relationship management, or other processes;
- Government portal a portal that contains information about a specific government institution, documents, files and download programs;
- Sports portal a portal that contains information about a certain sport or can be global, contains information about competitions and sports news;
- Other specific portals for a certain domain.¹



Figure 5. The Portal for the Courts of Justice

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¹ https://info12a.wordpress.com/2016/10/28/portaluri/.

² http://portal.just.ro/.

Search Engine

To understand how a search engine works, we must first understand what a search engine is. In short, it is a system that "crawls" information from the web, information such as pages, images, tabs, videos and other documents that can be identified when visiting a site. When a document is detected (or an update of an existing document), the new received data is stored on a search engine server. This is called "caching". After that, all the stored data will appear to the user in the SERPs (in the Google results pages) depending on the search that the user performs¹.

What is and how does the crawling process work?

Crawling is the ability of the search engine to go through billions of pages on the www. This is done by bots that do this replacing the "human hand" for which this process would be impossible. Robots expect signals from pages that have been indexed in the past, such as links, to be notified that new content has been created. So if you created a new page and attached it to the menu, say, or to an already indexed page, this is a signal to the robot to "come over" and index the new page. The new pages can be made known to the robots through sitemaps and or through the robots.txt file. New page detection can be accelerated by manually adding new pages through tools such as Google Webmaster Tools.

Peer-to-Peer Networks (P2p)

Peer-to-peer, or P2P in its abbreviated form, refers to computer networks that use a distributed architecture. In P2P networks, all the computers or devices that are part of them are called peers and share tasks. Each device that is part of a peer-to-peer network is equal to the other devices. There are no privileged "equals" and there is no administrative device at the center of the network 2 .

The main purpose of peer-to-peer networks is to share resources and help computers and devices work collaboratively, to provide a specific service, or to perform a specific task. As mentioned earlier, P2P is used to share all kinds of computing resources such as processing power, network bandwidth and disk storage space. However, the most common purpose for using peer-to-peer networks is to share files over the Internet. Peer-to-peer networks are ideal for file sharing because they allow computers connected to them to receive files and send them simultaneously.

If you download the same file over a peer-to-peer network using a BitTorrent platform as a starting point, the download is done differently. The file is downloaded to your computer in small chunks that come simultaneously from many other P2P computers that already have that file. At the same time, the file is sent (uploaded) from your computer to others who request it as well. The situation is somewhat similar to a two-way road: the file is like a series of many small machines that come to your computer, but also go to other destinations, when requested³.

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¹ https://dwf.ro/blog/motoarele-de-cautare-istoria-lor-si-statistici-actuale/.

² https://www.digitalcitizen.ro/ce-este-p2p-peer-peer.

³ Idem.

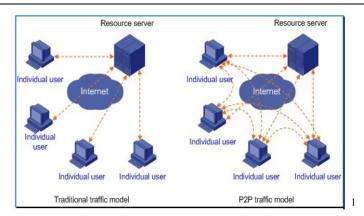


Figure 6. Peer-to-Peer Networks (P2P)

Web-Blog

A **blog** (word derived from the English expression web log = Internet journal) is a web publicațion (a written text) that contains periodical or updated articles that are usually of a personal nature. As a rule, updating blogs consists of adding new texts, like a journal, all contributions being displayed in reverse chronological order (the newest ones appear immediately, above, in plain sight). These types of web publications are basically accessible to the general public, but some may be for a fee.

The term "blog" appeared in 1997, when John Berger named his own site "weblog".

If in the beginning blogs were updated manually, over time "tools" (programs and methods) appeared to automate this process. Using such a software based on Internet browsere it is now a common aspect of *blogging*.

There are several blogging platforms, for example: Wordpress (the most well-known and used blogging platform), Blogspot, Blogger² and others.

For starters we could say that a blog is a kind of website. This site (called a blog) is a kind of public journal. In this diary you can tell stories, you can share knowledge, you can give your opinion. Basically, it is a place where you can write what you want and those interested can see. You can post videos, you can post pictures, to your liking.

The blog is a kind of chronology, because automatically everything you write on this blog (or everything you film) appears in reverse chronological order. That is, the newest articles will appear on the page first, and at the bottom of the page the oldest³.

There are blogs that have a *general character*, ie the one who posts writes about anything, but there are *also theme blogs*, depending on the expertise or interest of the one who publishes (posts) information (examples: *personal development blogs, cooking blogs, sports blog, blog health, blog negotiation, etc.*)

The blog at the moment is the most common formula by which authors, experts, politicians, writers, journalists, *express their opinions or communicate different things*.

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¹http://www.ejbtutorial.com/distributed-systems/service-models-for-distributed-systems, https://www.literaturadeazi.ro/rubrici/change-world/de-la-egal-la-egal-6633.

² https://ro.wikipedia.org/wiki/Blog.

³ https://www.life-university.ro/ce-este-un-blog/.



Figure 7. Web-blog

On Line Credibility

To get good results *from the online environment*, you need strong *credibility*². This can be difficult to achieve if you do not follow a number of essential rules. It's all about having an open, relatable human image, one that makes others identify with you/your brand. Also, the content you share with others plays a key role in how you are viewed by your audience/those you communicate with or address.

Here are the basic rules you need to follow in the online environment:

- ✓ Be transparent;
- ✓ Make a rigorous documentation;
- ✓ Communicate bilaterally;
- ✓ Be active.

Electronic Harassment

Art. 208 New Criminal Code - HARASSMENT

- (1) The act of a person who repeatedly pursues, without right or without a legitimate interest, a person or supervises his home, work or other places frequented by him, thus causing him a state of fear, shall be punished with imprisonment from 3 to 6 months or with a fine.
- (2) Making telephone calls or communications by means of remote transmission, which, by frequency or content, causes a person to fear, shall be punished by imprisonment from one month to 3 months or with a fine, if the deed does not constitute a more serious crime.
- (3) The criminal action shall be initiated upon the prior complaint of the injured person.

Harassment can take many forms³. Harassment can be:

- physical hitting, pushing, damaging or dispossessing personal property;
- verbal swearing, ridicule, or making sexist, racist and homophobic comments;
- social the exclusion of others from a certain group or the spread of gossip or rumors about them;

¹ https://www.wpbeginner.com/beginners-guide/what-is-a-blog-and-how-is-it-different-from-a-website-explained/.

² https://digitalu.ro/2017/08/22/cum-sa-obtii-credibilitate-in-mediul-online/.

³ http://www.edu.gov.on.ca/eng/multi/romanian/BullyingRO.pdf.

- written writing notes or signs that are annoying or offensive;
- *electronic* (*commonly referred to as internet harassment*) spreading annoying rumors or comments through the use of email, cell phones (eg instant messaging), and in social media applications for social interaction.

What is electronic harassment or online harassment?

It refers to electronic communications that:

- are used for the purpose of offending, threatening or embarrassing another person.
- uses email, cell phones, text messages, or social media sites for social interaction to threaten, harass, embarrass, socially exclude, or destroy reputations or friendships.
- include humiliating remarks, insults, and may also involve spreading rumors, providing personal information, photos, or video files, or threatening with malicious intent.
- are always aggressive and annoying.

Phishing

Phishing attacks are a cybercrime in which users are tricked into sharing their personal data, such as credit card details and passwords, by giving hackers access to their devices, often without even knowing they did so. It is essentially, an *infection that attacks your computer by fooling you into downloading it.*

Hackers then use social engineering tactics to get victims to click, share information, or download files¹.

Cyberviolence

The increasing accessibility of the Internet, the rapid dissemination of mobile information and the widespread use of social media platforms, in combination with the current pandemic of violence against women and girls (VAWG)², have led to the emergence of cyberviolence against women and girls, which has become a growing global problem, with potentially significant consequences for the economy and society³. Research shows⁴ that one in three women is a victim of some form of violence at least once in their life and, despite the fact that the phenomenon of internet connectivity is relatively recent and still growing, it is estimated that one in 10 women has already suffered a form of cyber violence after the age

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¹ https://ro.safetydetectives.com/blog/ce-este-phishing-ul/.

² http://publications.europa.eu/resource/cellar/0986a0fa-beb7-11e7-a7f8-01aa75ed71a1.0008.04/DOC_2 Violence against women is defined by the Council of Europe as "a violation of human rights and a form of discrimination against women and shall mean all acts of gender-based violence that result in, or are likely to result in, physical, sexual, psychological or economic harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or in private life" (https://rm.coe.int/168046253e).

UN Human Rights Council (2016). Non-binding resolution. Article 32: Promotion, protection and exercise of human rights on the Internet. Available at: https://www.article19.org/data/files/ Internet_Statement_Adopted.pdf.

³ UN Commission on Broadband Internet for Digital Development (2015). Cyber Violence Against Women and Girls: A WorldWide Wake-Up Call. Available at: http://www.unwomen.org/-/media/headquarters/attachments/sections/library/publications/2015/cyber_violence_gender%20report. pdf?vs=4259.

⁴ World Health Organization, Departament for Reproductive and Sexual Health Research of the London School of Hygiene and Tropical Medicine, South African Medical Research Council (2013). Global and regional estimates of violence against women: prevalence and health effects of intimate partner violence and non-partner sexual violence, p. 2. Available at: http://www.who.int/reproductivehealth/publications/violence/9789241564625/en/.

of 15¹. Internet access is fast becoming a necessity for economic well-being² and is increasingly considered a fundamental human right³; therefore, it is essential that digital public space is guaranteed to be a safe and affordable place for everyone, including women and girls.

Internet aggression, also called *online aggression* or *cyberbullying*, it is harassment using a computer or a mobile phone. Harassment takes place on blogs, personal pages, forums, e-mail, SMS, MMS, aggression sometimes taking place by uploading pictures or video images on the Internet without taking into account the victim's right to privacy ⁴.

Computer Piracy

The activities of reproduction, distribution or marketing of copyrighted works, without the consent of the author, are known as piracy and are illegal actions. They affect all parties involved in the creation and capitalization of these categories of works, such as: authors, distributors, consumers and, last but not least, the state. The term *piracy* is associated with the violation of intellectual property rights, which is taken from criminal law to be reused in the same matter, but with a slightly different connotation to designate, metaphorically, the phenomenon of illicit and massive reproduction of intellectual creations for commercial purposes⁵.

Piracy and using pirated software is illegal. Software licenses are subject to the protection of the updated Law no. 8/1996 on copyright protection. It classifies the use of any application or digital content, without payment of copyright or license costs, as piracy⁶.

"Art.139 (6) For the purposes of this law, pirated goods means all copies, regardless of the medium, including covers, made without the consent of the rights holder or of the person legally authorized by the rights holder and which are executed, directly or indirectly, in whole or in part, from a product bearing copyright or related rights or on their packaging or covers."

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https://www.realitatea.net/.

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https://dwf.ro/blog/ce-este-un-url/.

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¹ European Union Agency for Fundamental Rights (2014). Violence against women: an EU-wide survey – Main results. Luxembourg: Publications Office for the EU, p. 104. Available at: http://fra.europa.eu/en/publication/2014/violence-against-women-eu-wide-survey-main-results-report.

² Goal 9.C of the Sustainable Development Goals aims to provide universal and easy access to the internet, in recognition of its development potential (see: https://sustainabledevelopment.un.org/sdg9 and https://www.one.org/us/2015/09/26/the-connectivity-declaration-demanding-internet-access-for-all-and-implementation-of-the-global-goals/).

³ UN Human Rights Council (2016). Non-binding resolution. Article 32: Promotion, protection and exercise of human rights on the Internet. Available at: https://www.article19.org/data/files/ Internet Statement Adopted.pdf.

⁴ https://ro.wikipedia.org/wiki/Agresiunea_pe_Internet.

⁵ Daniel-Cătălin VELICU, https://www.juridice.ro/239256/pirateria-digitala-in-mediul-on-line-1-4.html.

⁶ https://playtech.ro/2018/problema-pirateriei-fapte-statistici/.

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http://www.euroavocatura.ro/dictionar/334922/Codul_sursa.

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https://www.literaturadeazi.ro/rubrici/change-world/de-la-egal-la-egal-6633.

https://ro.wikipedia.org/wiki/Blog.

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https://ro.safetydetectives.com/blog/ce-este-phishing-ul/.

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UN Human Rights Council (2016). Non-binding resolution. *Article 32: Promotion, protection and exercise of human rights on the Internet*. Available at: https://www.article19.org/data/files/ Internet_Statement_Adopted.pdf.

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https://playtech.ro/2018/problema-pirateriei-fapte-statistici/.