Numbers & Symbols

1-1 Algorithm: the basic algorithm to solve the beer game. Each supply level orders as much as has been ordered from him regardless of stock levels. (Chan, 2008)

1/f Fluctuation: the power spectral density of this noise proportional to the reciprocal of the frequency. 1/f fluctuation is also called 1/f noise or pink noise. It occurs in many fields. It is reported that people tend to feel comfortable to some time series that has 1/f fluctuation. The origin of its name is from being intermediate between white noise, 1/f0 noise, and red noise, 1/f2 noise. (Karashima, 2008)

1:1 Computing Classroom: a place where every child in the class has a laptop computer with wireless Internet and printer capabilities for at least fifty percent of the day. Ideally, every child would have a laptop 24/7 but the reality is that the learners may have access to mobile labs with a class set of laptops and a printer within a wireless environment for half of the learning day or might have access to the laptops during school hours only. (Kitchenham, 2008)

100% Online Course Approach: the approach where all course activities, resource use, interactions, and communications take place online, typically through an institutional course management system (McGee & Diaz, 2009)

1DNF: the technique that first builds a positive feature set PF containing words that occur in the positive set P more frequently than in the unlabeled set U. It then extracts the strong negative documents that do not contain any positive feature in PF. This technique can only extract out small number of negative documents. (Li, 2009a)

1G: the old-fashioned, first generation analog mobile phone systems capable of handling very limited or no data at all (Akhtar, 2009)

2 Pages Graph Layout Problem: the problem of finding an ordering of the nodes of a graph on a straight line, and assigning, to each edge, a location in any of the two halfplanes induced by that line, such that the number of crossings between edges is minimum (Mérida-Casermeiro, López-Rodríguez, & Ortiz-de-Lazcano-Lobato, 2009)

2-D Data Representation: a matrix containing vertical and horizontal indexes and can also be considered as a 2-D image. A 2-D repre-

sentation does not have to correspond to an image acquired by a camera or an imaging device. (Onur Hocaoglu, Nezih Gerek, & Kurban, 2009)

2.5G: the interim hardware and software mobile solutions between 2G and 3G with voice and data capabilities and data rates ranging from 56 kbps to 170 kbps (Akhtar, 2009)

2×2 Contingency Matrix: a 2 × 2 matrix whose columns and rows represent the output of the system and the gold standard, respectively. The elements of the matrix are the numbers of true positives, false negatives, false positives, and true negatives, upon which performance measures such as accuracy, precision, and recall, are based. (Suominen, 2009)

21st Century Learner: a student who uses skills, technology resources, and Web 2.0 tools to inquire, think critically, and gain knowledge in order to draw conclusions, make decisions, apply information, create knowledge, share resources, and participate as a productive member of the global economy (Klinger & Coffman, 2011)

21st Century Learning Skills: a series of competencies (the 4 Cs: Critical thinking/ problem solving; Communication, Collaboration; and Creativity/ innovation) considered to be essential learning for children to prepare them to live and work in an increasingly globalized marketplace. It was developed as a partnership between the U.S. Department of Education and eight international companies. (Burke, 2012)

24/7: the constant availability of technologies, especially in the home (Jackson et al., 2010)

24/7 Economy: the reality that for an organization to be competitive, individual employees must continually perform (Berge et al., 2009)

2G: the second generation of cellular networks. They appeared in the early 90's and they were numeric (instead of analog as in 1G networks). Voice and data could be transmitted at a maximum speed of 9.6 kbps. The main 2G standard is GSM (Global System for Mobile Communications). (St-Hilaire & Pierre, 2009)

3-D Computer Animation: a form of animation that trails users' motion behavior, i.e. walking, bicycling. It is animated using 3-D computer animation. (Arnberger & Reichhart, 2010)

3-D Computer Graphics: 3-D computer graphics are works of graphic art that are created with the aid of digital computers and specialized 3-D software. (Sanna & Lamberti, 2008)

3-D Interaction: a type of user interaction, where the output is displayed in 3-D (on stereoscopic or 2-D displays), and user input is received through 3-D interaction devices (Capin & Haro, 2008)

3-Dimensional: a graphic display including depth and height and width (Ellis & Anderson, 2012)

3-Dimensional Virtual Learning Environment (3D-VLE): a software system representing dimensionality for simulating physical movement and interaction with objects and other members designed to support teaching and learning activity (Laffey, Stichter, & Schmidt, 2010)