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QR CODING AND ALTERNATIVE TECHNOLOGIES

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Summary. This article describes the usage of QR-coding in Ukraine. QR-code is a simple, convenient, and interactive means of distributing and attaining information. The advantages of this code include large volume of data that can be coded and quick access to this data by means of system for scanning

and recognition available on modern mobile devices. QR-coding technology is usually used in advertising, trading, logistics, tourism, and banking. Along with QR-coding, the following alternative data obtaining technologies are used: Sonic Notify, RFID, NFC.

Key words: QR code, QR generator, Privat 24, QR market, Sonic Notify, Radio Frequency Identification, Near Field Communication.

QR code is a simple, convenient, and interactive means of immediate information access and distribution. It perform two functions: accommodates large amount of data (over two printed pages) in a small visual, as well as allows automatic scanning of coded data. Modern mobile phones, smart phones, and tablets have free built-in software for scanning and deciphering QR codes. Free applications for creating a unique QR code – QR generators – are available on the Web.

QR coding technology is used for saving time of clients and online shoppers. However, the fact that new information processing technologies appear in Ukraine does not mean that these technologies will be instantly requested. First, their capabilities, applicability, and profitability should be assessed.

This article is aimed at researching the usage of QR coding in Ukraine because this kind of coding is currently widely spread abroad.

In Ukraine, QR coding is used by many services: manufacturing (for marking tools), advertising, marketing, branding (logotypes), service and product coding, discounts, e-cards, Google Maps in tourism, e-banking.

QR codes are beginning to spread in banking. For example, PrivatBank uses QR code for several ser-

vices: logging into Privat24; service advertisements (for example, experimental advertisement 'QR supermarket' on Khreschatyk); payment for purchases in shopping centers or via the Internet; money transfer to other individuals without the need to specify their card numbers; cash withdrawal without the need for a card; participation in special promotions; ticket purchase from Ukrainian company 'AeroSvit Airlines'.

As any code, QR code has its alphabet, basis, structure, length, capacity, and checksum (hash sum) for automatic monitoring of errors that may occur during code scanning. QR code can also be read 'manually' without a mobile device. For this, the person must be familiar with QR code features and information deciphering algorithm. QR code uses binary data coding: black squares are coded by '1', while white squares – by '0'. To detect and correct deciphering errors, checksum algorithm is executed with the XOR command. In consequence of error correction, the code stays readable even when it is colored or overlaid with a picture.

Technologies alternative to QR coding include Sonic Notify, RFID tags, and NFC.

Usage of QR coding is not limited by any license; it is described and approved in ISO standards.

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