

Postupak ocjene doktorskog rada

DOKTORAND/ICA:	Ratko Knežević, dipl. ing.
NASLOV RADA na hrv. jeziku:	Upravljanje percepcijom promotivne fotografske slike promjenama kanala digitalnoga zapisa
NASLOV RADA na engl. jeziku:	Managing the perception of the promotional photographic image by changing digital record channels

SAŽETAK:
Promotivna fotografska slika prenosi informacije te utječe na percepciju konzumenta. Danas se većina promotivnih fotografskih slika ostvaruje reprodukcijom digitalnog zapisa fotografske slike. Digitalni zapis odnosno promotivna fotografska slika u prijenosu informacija temeljenih na vizualnoj procjeni je medij kojem konzumenti vjeruju. Svaka reprodukcija digitalnog zapisa sastoji se od plavog, zelenog i crvenog kanala digitalnog zapisa. U disertaciji se istražuje mogućnost upravljanja percepcijom promotivne fotografske slike promjenama plavog, zelenog i crvenog kanala digitalnog zapisa. Istražuje se utjecaj promjene kanala na prihvatljivost promotivne fotografske slike, utvrđuju se granice zadržavanja realističnog prikaza te njihova interpretacija. Istraživanje se provodi na dvije skupine ispitanika, ispitanicima-ekspertima i ispitanicima-konzumentima. Ocjenu prihvatljivosti ispitanici snimljene digitalne zapise promotivne fotografske slike određuju vizualnim procjenama. Uz istraživanja temeljena na procjenama ispitanika, definiraju se karakteristične tablice boja za pojedini vid promotivne fotografske slike te se određuju CIE $L^*a^*b^*$ vrijednosti boja, ukupne razlike boja ΔE_{00}, promjene svjetline (L) i kromatičnosti te promjene histograma digitalnih zapisa. Primjenom statističkih testova i deskriptivne analize utvrđuje se povezanost interpretacije promotivnih fotografskih slika i mjernih ispitivanja. Provedenim istraživanjem dokazano je da intervencijom u plavi, zeleni i crveni kanal digitalnog zapisa odnosno njihovim promjenama utječemo na percepciju promotivne fotografske slike. Rezultati procjene digitalnog zapisa promotivne fotografske slike pokazuju različite granice prihvatljivosti promjene pojedinog kanala digitalnog zapisa za promatrane fotografske slike. Ključne riječi: digitalni zapis, promotivna fotografska slika, plavi, zeleni i crveni kanal, vizualne procjene, promjene plavog, zelenog i crvenog kanala, prihvatljivost
EXTENDED ABSTRACT:
Promotional photographic images convey information and influence consumer perception. Today, most promotional photographic images are created through the reproduction of digital image files. Digital records, or promotional photographic images, are a medium in which consumers place trust when it comes to information based on visual assessment. Each reproduction of a digital record consists of blue, green, and red channels. Promotional photographic images are key elements of communication and marketing, as they convey information and shape consumers' perceptions of products or services. In today's digital age, most promotional photographs are produced through the reproduction of digital records, which include processing through the RGB (red, green, blue) channels of the digital record. According to perceptual psychology theory, the colors used in promotional photographs not only attract attention but also influence emotional reactions and consumer decisions. Therefore, understanding how changes in the blue, green, and red channels of digital records can affect respondents' visual assessments of promotional photographic images becomes crucial for the success of marketing strategies and their acceptability. As previously mentioned, a digital record consists of three basic channels – red, green, and blue (RGB). Each color or channel has its own values that can be manipulated to achieve specific visual reactions. A positive perception in promotional photography is based on the ability of images to evoke certain emotions and encourage consumer decisions. This research analyzes how changes in these channels affect the acceptability of visual representation. The dissertation explores the possibility of managing the perception of promotional photographic images by altering the blue, green, and red channels of digital records. It investigates the impact of channel changes on the acceptability of promotional photographic images, determining the limits of maintaining realistic representation and their interpretation. The research is conducted on two groups of respondents: expert respondents and consumer respondents with a focus on visual knowledge. The acceptability of the promotional photographic images' digital records is assessed by respondents based on visual evaluations. Alongside assessments based on respondents' evaluations, characteristic color tables for each type of promotional photographic image are defined, and CIE $L^*a^*b^*$ color values, total color

differences ΔE_{00} , changes in brightness (L), and chromaticity, as well as changes in the histogram of digital records are determined. By applying statistical tests and descriptive analysis, the relationship between the interpretation of promotional photographic images and measurement assessments is established.

The conducted research has proven that intervention in the blue, green, and red channels of digital records, through their changes, affects the perception of promotional photographic images. The evaluation results of the digital records of promotional photographic images show different limits of acceptability for changes in individual channels of the digital record for the observed photographic images.

Additionally, the obtained results reflect the complexity of visual perception and emphasize the importance of strategic management of digital record channels in the production of promotional photographic images. These results also provide a foundation for further research aimed at developing more effective visual communication strategies, as well as their perception, and can contribute to the optimization of digital communication and the creation of standardized and more attractive visual content.

Keywords: digital record, promotional photographic image, blue, green and red channels, visual assessments, blue, green and red channel changes, acceptability

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