AN ASSOCIATION–BASED GRAPHICAL PASSWORD DESIGN RESISTANT TO SHOULDER–SURFING ATTACK (WedAmOR8)

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Abstract:

In line with the recent call for technology on Image Based Authentication (IBA) in JPEG committee [1], we present a novel graphical password design in this paper. It rests on the human cognitive ability of association–based memorization to make the authentication more user–friendly, comparing with traditional textual password. Based on the principle of zero–knowledge proof protocol, we further improve our primary design to overcome the shoulder–surfing attack issue without adding any extra complexity into the authentication procedure. System performance analysis and comparisons are presented to support our proposals.