



Express and Forensic Document Verification

Feature: Gamification as a key to more reliable authentication

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There are a lot of definitions of gamification. All of them are based on implementing patterns known from the gaming environment into routine business processes. The gaming elements can include accentuated graphical features, military or fantasy elements, winning prizes or division into levels.

It seems that gamification lives according to Gartner's curve of technological innovation. At the very beginning, there is a sexy, innovative idea described in articles and discussed at conferences. However, only small number of organisations (early adopters) implement it. These enthusiastic implementations mostly fail to deliver expected results. The interest in the new concept declines. A bit later, other companies start to apply the concept again, on a smaller scale, using more practical approach.

The gamification answers the traditional business question on the motivation for detailed adherence to rules while performing boring routine processes. With some exception, users mostly tend to make more mistakes, work carelessly and neglect process steps.

Gamification does not replace guidelines, training and reporting but helps through motivation enhancement. Routine processes are enjoyable, to some extent, which means that users focus on them because they like them rather than because of external pressure.

In the beginning, gamification was applied to support routine work with simple applications, e.g. entering data into an interface. Identity document inspection is another boring routine task, and Optaglio decided to try gamification here.

Gamification experiments are part of a broader trend of emphasising the supervision of humans taking part in the authentication process. This trend results from experience that a human factor is often the weak link of anti-counterfeit protection. Even a perfect inimitable element does not help if the supervisor is not able to see the difference between a genuine and fake document, and he /she is not strongly motivated.

To approach this task, Optaglio currently builds a "psycholaboratory" step by step, focused on tasks such as measuring the ability of immediate spotting of a particular feature of the protection element. In this "psycholaboratory", the gamification concept was tested.

Concerning identity documents inspection, there are three typical situations:

- The check is based on machine reading. Human supervision only supplements it. Airport e-gates are an example of such arrangement.
- A human guard deals with a document holder with a suspicious look, strange behaviour etc. The document is thus checked thoroughly.
- A routine inspection performed by a human guard. Such situations offer the largest space for improvement.

Experiments organised by Optaglio focused on those situations when the participants had to – besides other activities – inspect hundreds of documents so that the inspection become routine, boring and uninteresting. The results are following. The following tools were used.

A hologram with QR code emerging from background after red light illumination. Through this QR code, an application was opened in a smartphone and the supervising person entered a serial number of the document.

The willingness to go through this procedure was low. Participants tried to avoid it whenever they got an opportunity.

Optaglio OVIimage product based on random distribution of microholograms.

The inspecting person uses a scanner for scanning microholograms position and sends the information into the central database. The system thus identifies the individual card. Using Optaglio OVIimage, the participants were ready to cooperate and reacted to gamification incentives well.

Testing gamification insisted in the following:

Information system environment included information about the document and also user rewards. A small picture, joke, or wise quotation were used as the reward; a small financial sum was tested as well.

Several levels were defined. Participants were continuously informed how many steps they need to reach the next level and get another reward.

The experiments confirm that:

- Gamification enhances motivation to perform thorough checks if the process is not too sophisticated.
- Even a minimal reward improves motivation significantly.
- A division into levels contributes to further raising of motivation.
- Gamification has no impact on user ability to spot visual features of the hologram. Holograms need to include features that are striking not only for experts but also for ordinary users.
- There is a quite big difference between experts and ordinary users in their ability to see deviation from genuine protection element.
- It is critical that there is a striking, impressive visual effect on protection holograms. Even seemingly minor difference such as emerging of logo or a small animal from the background can have a significant impact on motivation.

So far results of Optaglio Labs. Gamification cannot replace other measures but still brings significant enhancement in the motivation of inspectors. However, the critical message is concentration on inspecting person, in rules, processes and also the design of security features.