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User perceptions related to identification through
biometrics within electronic business

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User perceptions related to identification through
biometrics within electronic business

By

Ilse Giesing

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University of Pretoria

“Doing a research study is about discovering knowledge. Doing a research study well is about discovering knowledge that can be relied upon. Doing a research study well is not only about discovering reliable knowledge – it is about discovering knowledge in such a way that you are convinced that the discovered knowledge can indeed be relied on.”

Martin Olivier

I, *Ilse Giesing*, herewith declare that,

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is my own work and that all sources that I have used or quoted have been indicated and acknowledged by means of complete references.

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ABSTRACT

User perceptions related to identification through biometrics within electronic business

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KEYWORDS: Information Technology, Information Systems, Electronic Commerce, identification, biometrics, social factors, user perceptions, Technology Adoption Model.

Concerns over Information Technology security, including theft, fraud and abuse have forced organizations to take a cautious approach to Electronic Commerce.

This research study suggests that organizations can keep secure their resources by implementing an effective and accurate identification system, which will enable them to provide a better service to their customers and to prevent individuals from misrepresenting themselves to the organization. Various means of identification are available, but the key focus should be to establish accurate identity. The research study addresses biometric identification methods as a means of improving the security of on-line transactions. The specific focus is an investigation of user perceptions with regard to biometric identification methods.

The research study, through a theoretical understanding of the concepts found within the research problem statement, compiles a Technology Adoption Model for understanding why individuals accept or reject Information Technology innovations, which has proved to be one of the most challenging issues in Information Technology research. The exploratory field study section of the research study makes use of interpretive research as a basis to identify various themes related to user perceptions

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of biometrics. The themes identified are discussed during a focus group session with research participants. The main focus of the exploratory field study section is on user perceptions related to biometric identification methods and to enhance the Technology Adoption Model compiled by gathering user perceptions regarding the Internet, Electronic Business, biometrics and user adoption via a questionnaire to provide a possible solution for the research study problem statement.

From the exploratory field study, it was concluded that user perceptions will play a role with regard to identification through biometrics within Electronic Business and that the social factors trust, security, and privacy considerations will also have to be taken into account.

OPSOMMING

User perceptions related to identification through biometrics within electronic business

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SLEUTELWOORDE: Inligtingstegnologie, Inligtingstelsels, Elektroniese Handel, identifisering, biometrika, sosiale faktore, gebruikerpersepsies, tegnologiese aanvaardingsmodel.

Bekommernisse deur organisasies aangaande Inligtingstegnologie-sekureiteit, insluitend diefstal, bedrog en misbruik dwing organisasies om Elektroniese Handel versigtig te benader.

Hierdie navorsing studie stel voor dat organisasies hulle hulpbronne sekuur kan hou deur 'n effektiewe en akkurate identifiseringstelsel te implementeer wat organisasies in staat sal stel om beter kliëntediens te verskaf en wat ook die wanvoorstelling van individue aan organisasies sal verhoed. 'n Verskeidenheid van identifiseringsmetodes is beskikbaar, maar die klem moet op akkurate identifisering wees. Vir dié rede sal die navorsing studie biometriese identifiseringsmetodes bespreek met die doel om aanlyn transaksie sekureiteit te verbeter, met spesifieke klem op 'n ondersoek rakende gebruikerpersepsies verwant aan biometriese identifiseringsmetodes.

Die navorsing studie, met behulp van 'n teoretiese verstandhouding tussen die konsepte in die probleemstelling, stel 'n tegnologiese aanvaardingsmodel saam, aangesien die redes waarom individue Inligtingstegnologie innovasies aanvaar of afkeur een van die mees uitdagende konsepte in Inligtingstegnologie navorsing is.

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Die ondersoekende veldstudie gedeelte identifiseer 'n verskeidenheid temas, deur middel van verklarende navorsing, verwant aan gebruikerpersepsies van biometriese identifiseringsmetodes. Hierdie temas word gedurende 'n fokusgroep, wat deur die navorsings studie-deelnemers bygewoon is, bespreek. Die hoof fokus van die ondersoekende veldstudie gedeelte is op gebruikerpersepsies aangaande biometriese identifiseringsmetodes en ook op die verbetering van die tegnologiese aanvaardingsmodel. Dit word bewerkstellig deur gebruikerpersepsies aangaande die Internet, Elektroniese Handel, biometrika en gebruikeraanvaarding deur middel van 'n vraelys te versamel, om 'n moontlike oplossing vir die navorsing studie-probleemstelling te verskaf.

Die ondersoekende veldstudie toon aan dat gebruikerpersepsies wel 'n belangrike rol speel tydens die implementering van identifisering deur biometriese metodes binne Elektroniese Handel en dat sosiale faktore soos vertrouwe, sekuriteit en privaatheid ook in ag geneem moet word.

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