



SDSU
presents
a thesis defense for
Master of Science
degree in
Computer Science

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GMCS 418

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Research and Analysis on Improving Mobile Application Security by Using Multi-level Authentication Including Image Based Authentication (IBA)

Abstract

Advancement in security has always been a concern since Internet, Web Development and Mobile Application Development came into being; text passwords and captchas are now anachronistic and outdated approaches and are just not sufficient to stop all such problems. Therefore, this stresses the requirement for something more secure with added user-friendliness for the mobile application (iOS, android, windows, etc). Therefore, the attempt for security advancement has been made here by including text password as first level security, Image Based Authentication (IBA) as second level security, random one-time numerical code password or login (authentication) Link via email/sms as third level security. Also, a successful attempt has been made to obstruct attacks like Tempest attack, Eavesdropping, and Brute-force attack by using unique image sets/ Egyptian hieroglyphs in this secured Authentication Gateway.

Keywords for this thesis include: Image Based Authentication System (IBA), Java, Android, Mobile Application, Eavesdropping, Tempest Attack, Brute-force Attack.

Thesis Committee

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