Global Edge Through Software Testing

- Established in 1998 with RM10 millions paid-up capital.

- Specializing in ICT Services/Consultancy, ICT Equipment Maintenance, Production & Distributing of ICT Equipment/Hardware.

- Expanded to ICT Biometric Security System development using Facial Recognition Technology (FRT) called Mutiara Security System (MSS).

- Having 20,000 sq. ft. of manufacturing, assembly, sales & hardware development facility.
Software Testing

- **Software testing** is an investigation conducted to provide stakeholders with information about the quality of the product or service under test.

- Software testing also provides an objective, independent view of the software to allow the business to appreciate and understand the risks at implementation of the software.

- Test techniques include, but are not limited to, the process of executing a program or application with the intent of finding software bugs and minor/major defects (vulnerability).
Software Testing

- Meets the business and technical requirements that guided its design and development
- Works as expected and meet the scope of the development
- Can be implemented with the same characteristics
- To meet industrial standard – Financial, Military, etc.
- and many more.
Software testing is infamous!

- Our company are producing software since 1999 in various fields and platform.
- Our objective during development is to complete the development as soon as possible, deliver the products and collect the payment with the lowest investment as possible.
- Settle the problem or debug the errors as it goes.
- Basically we are allowing the software to be tested by our clients in customers operation environment.

- For many companies, the software will be tested in 2 main categories-
  - Meeting the scope
  - No error message – let it run and see if it fails.
Software testing is infamous!

- In many cases, or in most cases, customers never ask about the testing.
- Most customers and the developers assume that if the software works as per scope, then it met the requirement.
- For the companies, who develop the software “No ask and No answer” when it comes to the software developments.
Why these happens?

- Is it the cost the main factor for the software are not properly tested?
- Is it the Knowledge or Awareness?
- No Standard/Common Criteria for GTM requirements?
In our opinion.

- Is the **awareness**.

- It’s the **requirements (Customers)**.

- It’s a **standard** – The must be an imposing mechanism for the standard such as MS (MALAYSIAN STANDARD), FC, CE for electronics products.
How we come to adopt

- Customer requirements.
- To boost our confident in our products
- And its starts when we engage our first foreign customer. – How do you assures ur product are properly tested?
Why these happen?

- Customers awareness.
- Customers knowledge.
- Developers awareness.
- Developers knowledge.
- The existent of standard body to support and to certify.
- Cost and time.
How to resolve (our suggestions)

- Incorporate the certifications of the software related products as a must in the product specifications.
- To make cheap or FOC to acquire the standard.
- Intensify the awareness campaign.
- To make it easy for the software producers to engage the certifications body (probably every region on center).
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Preparation needed.

- Adequate human capital resources – introductions of related courses in our educations system (with a certifications)
- Fund or grant for companies who are engage on SW testing certifications for their products.
- Adequate organization or certifications bodies nationwide
- Etc...
Lesson Learned

- Our product are delayed to market for close to 1 year due to certifications challenges.
- It’s much more easier for us and our customer to accept the SW products with a certifications (3rd party).
- We can now confidently bring our software to global with a propel certifications.
What is MSS?

- A computer security system that mainly uses Face Recognition Technology (FRT) to automatically authenticate its user before they could perform any action on the selected application on a Microsoft Windows-based platform.

- Exclusively designed to protect unauthorized usage on a computer (desktop or laptop) to maintain its security and confidentiality.

- Only system administrator has the privilege to set the authorization level of other users on the machine.
How Does MSS Work?

- **Protect access to computing device**
  - It will only recognize the owner and authorized user

- **Protect access to application**
  - Could only be defined by owner and authorized user
  - Only will do computer applications (copy, cut, paste) if run by owner and authorized owner

- **Protect access to any confidential data/ stored information**
  - If computer is being compromised (theft), device will not function and no longer usable
Why Choose MSS?

- **Easy to implement**
  - Use facial image as key identification, user just need to sit in front of the computer.
  - Computer is automatically locked and data are encrypted immediately after it cannot detect any authorized user.

- **Secure and reliable**
  - Holistic data protection even in the worst case scenario; stolen computers – data would be shredded.
  - Data only accessible and readable by authorized user.
Why Choose MSS?

- Has layers of security to ensure the data are bulletproof from unauthorized usage

- Flexibility
  - The system settings can be set up or maintained by the system administrator accordingly without hassle
MSS Key Features

- **Windows Application Control**
  - Protect access to computer – only the owner can access it
  - Protect access to application – can be defined by system administrator
  - Copy, cut, paste functions – only by authorized user
  - If your computer is stolen
    - Device no longer usable
    - Data is save – any unauthorized attempt to access the data, data will be shredded
MSS Key Features

- **Data Encryption**
  - Computers are equipped with built-in data encryption
  - Data is automatically encrypted to prevent unauthorized user accessing it
  - Your data is only for your eyes and the user which has been granted authorization.
  - Use the AES 256 bit key encryption
MSS Key Features

- Hard Disk Shredding
  - In case of stolen computer, the data is protected or shredded to ensure confidentiality and avoid leaks of the stored information
  - Hard Disk Shredding is the best solution to securely obliterate the data on your hard disk
Mutiara Security System (MSS) Level 0 System Flow

BIOS Level

1.0 HardDisk Shredding Event

2.0 Crypto Service Event

3.0 Image Processing Event

3.1 Admin Module

3.2 Digital Rights Management

3.3 Screen Blackout

4.0 Crypto Service Process

5.0 System Shutdown/Logoff Event

Application Level

By Application Engineering Department
Thank You