



**PCD Awards 2005
SUBMISSION FORM**

Category: PCD Solutions

Deployment State: Concept, Prototype

PCD Solutions are intrinsic or embedded and exclusively focused on the business or organizational performance outcome in measurable ways. For example, a PCD Solution that *replaces* the interface of an enterprise application such that (a) the frequency of data entry errors is reduced; (b) the frequency of incomplete information entered into the system is reduced; (c) the speed with which data is entered is substantially increased; and (d) the need for any form of learning in advance of doing is *eliminated* is performance-centered.

Entry Title *Security Alarm System – A new and innovative concept*

Submitted by: *Awangan Jaya Sdn Bhd*

**Contact
Name:** *Wee Kee Heng*

Phone: *603-2170 2688*

E-mail: *weekeheng@yahoo.com*

Address: *Suite 16-8, Level 16 (Lobby B)
Wisma UOA II, 21 Jalan Pinang
50450 Kuala Lumpur, Malaysia*

Logo: 

Purpose: *An intelligent user interface for security alarm system in today's
lifestyle homes and offices*

Classification:

How would you classify your PCD Solution? Check one:

- Traditional EPSS - external or extrinsic "EPSS" solutions with designs rooted primarily in learning or reference
 - Performance-centered workflow solution - any PCD solution with a focus on directly supporting business processes (aka workflow)
 - PCD makeover - solutions that replace existing user interfaces with ones that exhibit attribute and behaviors of performance-centered systems
 - Embedded/ intrinsic PCD solution - performer-centered solutions that are strictly embedded in the task context and focus on task completion - not learning - without breaking the task context or flow
 - PCD featuring innovative technology - any performance-centered solution that features technology other than just a user interface to enable or enhance performance
 - Other category (describe):
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**Installer
Programming
and Support
Issues:**

- The standard user interface for any security alarm system installed in homes and offices consists of either a LED keypad or a LCD keypad with 2-line alphanumeric display. The visual cues it gives are based on combinations of LED lights being on/off or flashing in the event of alarm or trouble in the case of LED keypad. The installer uses the keypad to program the alarm system and the end-user (home owner or office manager) uses it to operate the alarm system. This interface is based on a design that is almost 20 years old.
- The installer has to program the alarm system before it can be activated. Programming the alarm system on-site can easily take 15-30 minutes as a typical programming worksheet has about 100 lines of codes. The installer uses the keypad to key in all the relevant addresses/locations and defines the alarm parameters such as zone definitions and attributes, system timers, communicator settings, programmable outputs, system options, etc. To guide him in his programming, the installer has to decipher the combination of the Zone LED lights and the keypad beeps as validation of the key entries – a tedious and error-prone activity for even the most experienced installers. A programming manual is usually required for this purpose.

- The HAWK 8 replaces the antiquated keypad with a new and innovative interface that brings the capability of self-service to the installation and maintenance of existing alarm systems. The installer now programs the alarm system with the aid of a Pocket PC. Typical alarm programming with the Pocket PC should not take more than 5 minutes and the installer simply beams the parameters into the system using wireless communication that comes with the HAWK 8.
 - Programming is now at a high-level using drop-down lists, check boxes and buttons, and entering data using the Pocket PC. No programming manual is required. Installer or any novice can learn to use the program within a few hours compared to weeks or months of training on the current systems. To view or to update the parameters, the installer can easily download the data by entering a valid installer code. Upload/download of parameters takes about 10 seconds on the Pocket PC.
 - Learning how to program a new control panel has always been a daunting task for the alarm installer. There is currently no standard in the security industry for alarm programming. Every alarm system is programmed differently sometimes within a vendor's own product line. Security service organizations have a logistics nightmare trying to keep their installers trained on the different models/brands of alarm systems and to dispatch field support staff who are familiar with the brand of the alarm system. This is not only inefficient, but extremely costly, a cost that will eventually be passed on to the consumer.
 - The HAWK control panel and keypad replaces any of the existing wired alarm systems out of the box. It's a matter of disconnecting and reconnecting the wires at the control panel. Once it is done, you will have an interface that any installer can service.
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**End-User
Operations and
Diagnostics:**

- One of the biggest problems associated with most alarm systems today is the inability of end-users to diagnose alarm and trouble events. The LED keypad, being the interface to the alarm system uses a combination of blinking LED lights (Fast or Slow), keypad buzzer and siren/bell to warn end-users of alarm problems. This alarm / trouble reporting mechanism is too complex for end-users to decipher. Most end-users are therefore dependent on the alarm installers to solve alarm / trouble problems. The more expensive LCD keypad can provide more meaningful information using the 2 lines of alphanumeric display.
- The HAWK 8 uses the Pocket PC to integrate security with information technology and provides the end-user with better management and control of their security alarm system to:
 1. easily diagnose any alarm or trouble events,
 2. view the details of the event history log,
 3. list the detail alarm configurations and
 4. perform any of the alarm operations with little or no training
- Most end-users are only knowledgeable to perform very basic alarm functions such as Arming and Disarming of the system and Bypass of zones. These simple operations typically require between 1 – 3 steps on the keypad. Other alarm functions, which are less often used, may take more than 3 steps and will appear to be quite complex for a normal user. A typical example is to change the access code or user code that may require 5 programming steps on the LED keypad.
- Most end-users do not know the exact alarm panel configuration of their alarm system unless the installer has provided a detailed drawing and labeled all the zones, sensors and protected area of the property. This information is essential for end-users to identify the location of the sensors in the event of system alarm or problems with the installation. Quite frequently this drawing may be misplaced after the installation.

1. Supports performers through best practice processes.

Currently field support staff has to rely on feedback from the end-users to solve alarm problems. The performance of support staff really depends on the experience and knowledge of the individual. With the HAWK 8, the staff will be well equipped with all the relevant information required to solve the problem. The Pocket PC will allow him to perform the following that were not possible in the past. Such as:

- a. view existing alarm configuration
- b. view the details of event history log
- c. view the alarm and trouble history log
- d. view the alarm parameter settings

In this way, the installer does not need to troubleshoot alarm problems in an ad hoc fashion.

2. Establishes, or aids in establishing, goals.

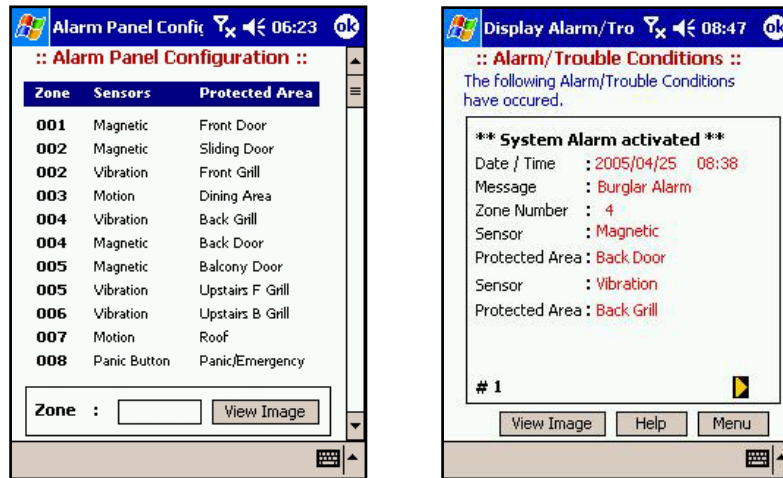
In a similar way, the Pocket PC will also allow the end-users to diagnose most of the alarm and trouble events. In this way, the end-users will become more knowledgeable about the working of the alarm system and eventually become more independent to handle most of the alarm problems in the future. This will also help to reduce the frequency of false alarms.

3. Minimizes terminology translation or interpretation.

The installer is no longer required to remember any of the memory addresses or locations to perform alarm programming or to make changes to any part of the programming worksheet. All the programming functions are simple and require no terminology translation or interpretation. This reduces the time for programming and training of the installer tremendously.

For the end-user, it is no longer necessary to interpret what each blinking LED lights or trouble beeps on the keypad means during an alarm or a trouble event. Currently, you need to be a technically inclined person to understand the user manual in order to interpret the various alarm and trouble LED lights especially when the end-users experience the problem for the first time or has not encountered the problem for a long time.

With the HAWK 8, the end-users only need to select the appropriate icons and download all the data to the Pocket PC. The application software will interpret all the alarm and trouble events and display them in a format using simple terminology. All alarm functions and screen formats are simple to use with virtually no advance training required.



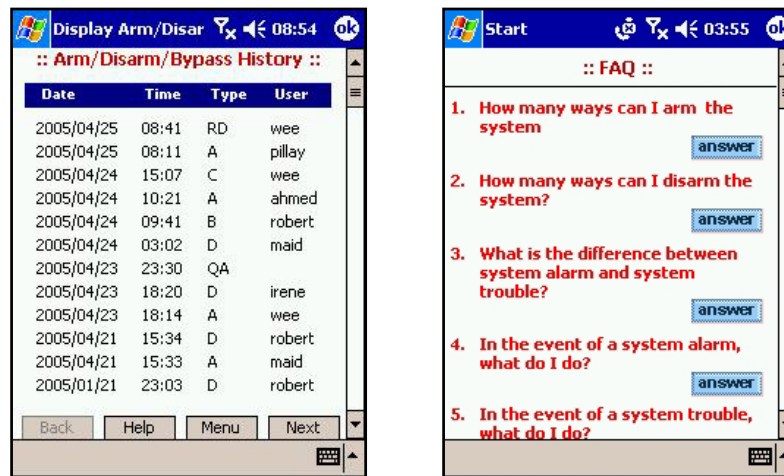
4. Provides access to supporting and learning resources.

The event history log represents one of the most important features in a security alarm system to allow end-users to review or verify the alarm transactions (date/time, arm, disarm, bypass, alarm, trouble and user) so that they can determine what has gone wrong or to check who has performed certain transactions. Yet such information cannot be made available to the end-users using the LED keypad and only limited and cumbersome display on the LCD keypad.

The Pocket PC can be used to download the event history log from the control panel and display them in a meaningful way. A sample format of the event log listing is provided below.

Where appropriate help screens will be provided to assist end-users in performing each of the alarm function with simple explanation. The screens can also be multi-lingual to support a wide number of international customers.

Also a FAQ library has been developed to capture all the important Questions/Answers to assist the end-users to resolve problems and to understand the alarm system better.



5. Focuses on task(s), processes, and the natural flow of work.

The high level alarm programming on the HAWK 8 provides simple menu driven functions. In each of the function, the installer merely has to select options or input relevant data as required. The system will also check for input errors and only display relevant parameters allowed depending on user selection. Since the installer does not need to remember any addresses and parameter formats or view status of LED lights, the speed of alarm programming is greatly increased.

6. Reduces or eliminates the need for training/learning.

HAWK 8 addresses two aspects of product training. One is aimed at reducing the complexity of alarm programming to at extent that it may become a DIY product. Training of any existing or new installer for alarm programming will be reduced to an absolute minimum. The other aspect deals with the training of end-users. Whilst it may be a good practice to conduct formal end-user training, it is difficult to determine whether this is actually done at customer sites. One of the major contributions to false alarms is the lack of training or understanding of the security alarm system. To supplement this training a self-training power point slides for end users have been

developed for the HAWK 8.

7. Supports performance FIRST, and learning only as a secondary consequence of doing.

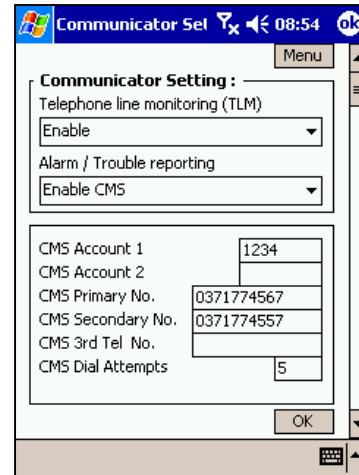
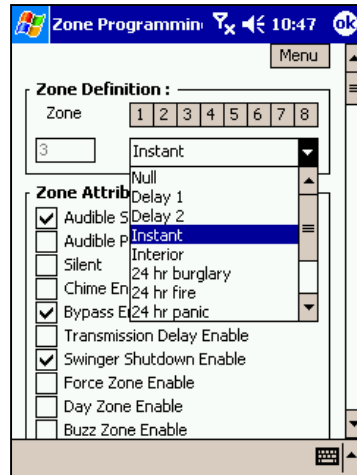
HAWK 8 eliminates complex manual programming / operations / diagnostics on the keypad and provides a self-service capability with the Pocket PC. Each alarm function/task is simple to operate and end results are automatically displayed in a meaningful way. One example is to display the names of users performing the functions in the event history log rather than showing the access code that requires further interpretation. Another example is to add or change access code by simply keying in the code and name of user rather than remembering the user number associated with the access code. As end-users begin to interact with the system more often using the Pocket PC, the end result will be that the end-users will become more knowledgeable about the working of the security system. In this way, the end-users will become more independent and self sufficient to handle most of the alarm problems in the future.

8. Stretches the PCD/EPSS paradigm.

HAWK 8 institutes a radical departure from the conventional alarm programming using the keypad. HAWK 8 does not support installer programming using the keypad. The Pocket PC represents the only way forward to eliminate the old way of primitive alarm programming using the keypad. The Pocket PC programming interface provides a quantum leap in terms of installer productivity, performance and field support. Alarm programming can be executed at any time and the parameters can be stored in a template on the Pocket PC and later beamed to the control panel at site. The application software allows the installer to create and store up to five alarm configuration templates. However, the keypad still remains the primary user interface to the alarm system for the end-users. The Pocket PC is an optional device that will provide new levels of management information and self-diagnostic capability for end-users thereby, eventually shifting the management and control of the alarm system to the end-users.

Prior State (or current state, if concept is not yet in a pilot or test phase):

(Required for all Concept entries)



Sample screens of alarm programming on the Pocket PC

User/performer Profile:

(Required for all Concept entries)

There is no specific prerequisite needed to use the HAWK 8 alarm programming and alarm operate application software. Some knowledge on the use of a Pocket PC will be desirable and basic understanding of alarm terminology may be necessary to program the control panel.

The results will be tremendous improvements in productivity for the alarm installer in terms of installation, field support and training required. The end-users will now be capable of self-diagnostics and have better control and management of their alarm system. This can also help reduce the frequency of false alarms that have been a big problem for the security industry and the law enforcement authority.

Expected results:

(Required for all Concept entries)

Alarm programming using Pocket PC versus Keypad programming – Productivity improvements at least 5X
 Training of installer for alarm programming using Pocket PC – Productivity improvements at least 10X
 Alarm/trouble diagnostics using Pocket PC – very easy
 Access to event history log using Pocket PC – very easy
 List Alarm configuration using Pocket PC – very easy
 List /Update Access codes using Pocket PC – very easy

Other Evidence:

Describe anything else that contributes to your submission being an exceptional and/or innovative PCD Solution concept.

A convenient 8-button wireless remote control is in integral part of the

HAWK 8 product offering used for quick arming, panic button and home automation control. This is similar to the concept of IR remote control used by other home appliances such as TV or air conditioner. There are also many innovative alarm functions and features that are incorporated in the product that have not been mentioned in this submission.