

## SMART Training

On 9<sup>th</sup> January 2007 the SMART Tunnel operations personnel were given overview training on the Tunnel Monitoring and Control System (TMCS) by inCONTROL Tech Sdn. Bhd. (formerly known as VA TECH SAT Sdn. Bhd.). This training was conducted by engineers from iTEC led by Vijay Chelliah at the Motorway Control Centre (MCC) which is situated near the previous Kg Pandan roundabout.

A total of 20 plus personnel from the Operations division of the SMART took part in this training program. The training started with an overview of the entire system. Next, detailed descriptions of individual components of the systems were presented. The training was very interactive with questions being asked by the operations personnel seeking a better understanding.

After this initial briefing, all the personnel were taken for a site visit to the actual tunnel location. Here a briefing was given on the actual equipment that are controlled and monitored by the TMCS. The first site location was Cross Passage 1 and this was then followed by a trip to North Junction Box and finally to Bifurcation site. All throughout the trips a lot of questions and answers sessions were conducted. Other equipment which were provided and installed by Itec were also introduced and briefly described.

Finally, everyone was taken back to MCC. At this point using the actual TMCS, training was provided on how the systems will manage all the equipment which were shown during the site visits. This also included various monitoring options, status changes and alarms. Here more emphasis was given on individual functionality of each sub system. This included sub system such as the ventilation system , the variable message system (VMS) , the accident incident detection (AID), close circuit television cameras (CCTVs), digital video recorders (DVR) and other various sub systems.

The training was concluded with the whole day's training summary together with another round of overview of the TMCS.



Figure-1: MCC



Figure-2: TMCS Control Center