ANTARIUS IS Private Limited

Your Trusted IT Solution Provider

Experience Profile

Our Key Businesses

We have four core businesses & competencies:

1.   Technical Support and Outsourcing Services

Antarius technical support and outsourcing services cover every aspect of IT infrastructure support, from installations to complete maintenance services. We'll shoulder the day-to-day responsibility of managing your distributed computing environments and be your single point-of-contact for all your maintenance needs.

Infrastructure support

- Proven expertise in the design, deployment, and support of your business-critical and distributed computing environments.

- The expertise to support every piece of your IT infrastructure through multiple channels: over the phone, through on-site services, or via the Internet.

- Proven expertise in service processes, support methodologies, and installation processes.

- 24x7 technical support services ensure maximum availability of all equipment. From notebooks and desktops. To networks. To enterprise servers.

- Installs, Adds, Moves & Changes: Keep your infrastructure flexible and current. (including software releases)

Network support

- Skilled in multiple technologies and multi-vendor networks, our engineers and technicians have deep technical knowledge and can resolve problems that occur - maximizing network uptime, availability and performance. We rigorously train our engineers in the latest tools and technologies.

- Regular scheduled network maintenance and inspection of your networking system to minimize down-time. System cleaning, inspection of backup systems, network hardware testing and file defragmentation will help ensure that your network system will continue to run smoothly. This will also allow you to discuss your current or future needs with our network technicians while they are in your offices.

- Because networks are about serving your business, we invest in understanding your business environment, computing environment and the implications for your users when we address your network design, implementation and maintenance.

- Our level of involvement in the implementation and/or ongoing support of your company network will be tailored to meet your requirements and resource levels

2. Technical Training Provider

Antarius is appointed by Avnet Technologies (one of the Global Training Provider – GTP appointed by IBM) as their sole Training Partner (ATP) in Singapore and Asia for UNIX training, providing the full range of IBM Power Systems (AIX on IBM System p and Linux), PureFlex System and System Storage courses.

Our primary objective is to help organizations to optimize their investment in technology and human resources. We achieve these by imparting our technology knowledge and critical skills required for your employees to further your company's growth.

With a team of IBM Certified AIX & Storage Specialists holding professional degrees and several years of industrial exposure in their respective fields to deliver the courses, the quality of our training is guaranteed.

Our courses are scheduled regularly throughout the year for your training needs and management planning. We can also package and customize the courses for group training to suit your requirements, should you not be able to attend the published classes. Our courses are delivered mainly in English in Singapore and other countries. We also welcome any request for courses to be conducted in Mandarin or at customer's premises.

Our method of delivery includes:

- Lecture and Q&A session for each unit;
- Follow-up with hands-on laboratory exercises to reinforce the concept learnt

Each student will be provided with a set of student materials, writing materials and workstation for hands-on learning.

Upon completion of each course, a certificate of attendance will be awarded to all course participants. On top of that, by way of our commitment to your company's success, our technical helpdesk support is available to all course participants for one full month following the completion of the course.

3. IBM Business Partner

We are one of the preferred IBM Reseller for Power Systems in Singapore; this includes the robust and expandable System I (previously known as iSeries - AS/400) and System p Enterprise Servers (previously known as pSeries).

We have consistently positioned our expertise in the areas of system integration as well as application and data migration. Our value-add is to provide customers with a total solution in integrating the servers into the overall organizational structure and ensuring that the servers are well optimized. By understanding customers business, we're successful at providing tailored-technology designed to meet their specific needs.

Some areas of expertise that we possess:

- Providing system migration across different versions OS and platforms
- Providing application migration across different servers. Some key applications include Oracle, DB2, as well as various ERP or CRM applications
- Providing performance tuning and enhancements on various Unix and WinTel platforms
- Providing system consolidation on AIX.

4.   Professional IT and Consultancy & Services

Antarius' seasoned team of consultants has the proven experience to handle a project from beginning to end, no matter how complex. Antarius will meet and exceed her customers' expectations with our consultants, who possess more than a decade of relevant technical experience.

Our solutions span across IBM's broad range of server products. This includes the Power Systems, PureFlex System, System x and System Storage solutions.

- Professional AIX system support (PASS)
- Professional Wintel and end-user system support (PSS)
- IBM Virtualization, PowerHA and Live Partition Mobility services
- Server consolidation and system integration
- Application and data migration
- PureFlex System, System Storage and backup implementation
- Business continuity and recovery services

Our Strength

Our company presently employs a full team of IT professionals and specialist to support our growing list of clients in corporate as well as public sectors.

The founding partners are technical and business professionals who have acquired years of experience in the IT Industry.

The true strength lies in our engineers' expertise to deliver premier products & services to our customers at every stage of their business operations.

IBM Top Performing pSeries Reseller, 2005 Authorized Training Partner-AIX Courses	**Microsoft** Product Solution offerings	**Lenovo** Product Solution offerings, Reseller
DB2 Product Solution offerings	**WebSphere** Product Solution offerings	**Tivoli** Product Solution offerings
Oracle Product Solution offerings	**Informix** Implementation	**Cisco** Implementation

Symantec SMB specialized	**Veritas** Product Solution offerings	**Linux** Implementation	**Veeam** Silver Partner
Vmware Professional Partner Level & Solution Provider	**ShadowProtect** Product Solution offerings	**HP / Compaq** Product Solution offerings	**CA** Product Solution offerings

Our Related Experience in Engineering Services (Island-wide)

In Singapore, for last 18 years, Antarius key professionals have provided Singapore Technologies - including ST Electronics (Info-Software Systems) Pte Ltd and ST Electronics (Info-Comms Systems) Pte Ltd, with qualified and experienced project managers and engineers to perform Installation, Checkout, Integration & Test (hereafter known as ICIT) activities. We also manage, deploy, relocate and maintain equipment for the various Government Ministries in Singapore and in Hong Kong.

MINISTRY OF HOME AFFAIRS AGENCIES

Project coverage for Singapore Police Force (hereafter known as SPF), Police Coast Guard (hereafter known as PCG) and Central Narcotics Bureau (hereafter known as CNB)

- No. of Sites – approx. 60 sites (including HQs, Divisions and Neighbourhood Police Centres)
- No. of Appliances – approx. 600 appliances (including patrol cars)
- No. of Equipment supported – approx. 520 Workstations and 600 Mobile data terminals

Project coverage for Singapore Civil Defence Force (hereafter known as SCDF)

- No. of Site – approx. 40 sites (including HQs, Divisions, Fire Stations and Fire Posts)
- No. of Appliances – approx. 170 appliances (including fire fighting vehicles and ambulances)
- No. of Equipment supported – approx. 170 Workstations 170 Mobile data terminals

---

- Awarded by Singapore Engineering Software Pte Ltd (a.k.a. SES), which is known today as ST Electronics (Info-Software Systems) Pte Ltd to provide **ICIT Management services** for a project with the above home forces (Island-wide)

  - ❖ Year Commenced and Completed: 1998 to 2001 (4 years)
  - ❖ Scope:
    - o Manage ICIT activities (Island-wide)
    - o Manage the setup/install, deploy and commission of hardware
    - o Assist in the furnishing of hardware setup/installation guides and on-site acceptance guides. This will form as part of the quality control for this program
    - o Assist in coordinating with other subcontractors, vendors, suppliers, consultants, customers etc. on matters relating to ICIT management; especially checking-in of hardware delivered from suppliers to customers' premises for setup/installation
    - o Support the integration at customer's premises by providing the necessary hardware and software, which may require some configuration works to be performed

---

- o   Furnish extra plans or reports
- o   Ensure that systematic, effective and efficient work-flows are in-cooperated and all schedules are met

----

- Awarded by SES to provide **<u>Installation services</u>** for a project with the above home forces (Island-wide)

  - ❖ Year Commenced and Completed: 1998 to 2001 (4 years)
  - ❖ Scope:
    <u>Off-site</u>
    - o   Image preparation – Software installation, testing, verification of image before the actual roll-out

    <u>On-site</u>
    - o   Installment and configuration of network setting
    - o   Prepare the workstation to be in a OSIR state
    - o   Install and configure the workstations, mobile data terminals (hereafter known as MDT) and its peripherals
    - o   Testing, troubleshooting and commissioning the workstation, inclusive of login test
    - o   Prepare the necessary related documentation

- Awarded by SES to provide **<u>Relocation services</u>** for project equipment deployed at SPF and SCDF premises (Police HQs, Police Divisions, Neighbourhood Police Centres, SCDF HQ, SCDF Divisions, Fire Stations and Units)

  - ❖ Year Commenced and Completed: 2000 to 2005 (Ad-hoc basis)
  - ❖ Scope:
    - o   Conduct site survey at new location
    - o   Disconnect/dismantle equipment
    - o   Pack and transport equipment to new location
    - o   Setup equipments at new location
    - o   Conduct operational test on the equipment (Login, print)
    - o   Re-configure equipments where necessary
    - o   Prepare the necessary related documentation

- Awarded by SES to provide **Preventive and Corrective Maintenance services** for project equipment deployed at SPF, PCG, SCDF and CNB premises

  ❖ Year Commenced and Completed: 2002 to 2005 (4 years)
  ❖ Scope:
     o To support C2 related equipment deployed at the above home forces
     o Respond to MDT fault calls and to rectify (includes troubleshooting, problem identification and solving where possible) or escalate to third party vendor accordingly
     o Respond to Workstation fault calls and to rectify (includes troubleshooting, problem identification and solving where possible) or escalate to third party vendor accordingly
     o Plan and perform yearly preventive maintenance for the above home forces

----

- Awarded by SES to provide **Preventive and Corrective Maintenance services** for Fingerprint System deployed at SPF

  ❖ Year Commenced and Completed: 2005 to 2005 (8 months)
  ❖ Scope:
     o Primary role is to provide on-site hardware support to MDT fault calls and to rectify (includes troubleshooting, problem identification and solving where possible) or escalate to third party vendor accordingly
     o Respond to Workstation fault calls and to rectify (includes troubleshooting, problem identification and solving where possible) or escalate to third party vendor accordingly
     o Plan and perform yearly preventive maintenance activity

----

- Awarded by SES to provide **Installation services** for equipment deployed at Ministry of Home Affairs (Singapore Prison Service)

  ❖ Year Commenced and Completed: 1999 to 1999 (9 months)
  ❖ Scope:
     Off-site
     o Image preparation – Software installation, testing, verification of image before the actual roll-out
     On-site
     o Installment and configuration of network setting
     o Prepare the workstation to be in a OSIR state
     o Install and configure the workstations (with Trusted OS) and its peripherals (whitelisted)
     o Testing, troubleshooting and commissioning the workstation, inclusive of login test
     o Prepare the necessary related documentation

Awarded by ST Electronic (Info-Software Systems) Pte Ltd to provide **Relocation services** for project equipment deployed at SCDF HQ and CDA

- ❖ Year Commenced and Completed: 2011 to 2012 (3 months)
- ❖ Scope:
  - o Conduct site survey at the new server rooms located at the above 2 premises
  - o Disconnect and un-mount all equipment
  - o Pack and transport all equipment to new server rooms
  - o Mount and setup all equipment
  - o Map and patch the network connection for the sever farm and devices
  - o Conduct point-to-point connectivity test for the equipment
  - o Prepare and update the network patching records

Project coverage for Singapore Civil Defence Force (hereafter known as SCDF)

- No. of Site – approx. 57 sites (including HQs, Divisions, Fire Stations and Fire Posts)
- No. of Appliances – approx. 539 appliances (including fire fighting vehicles and ambulances)
- No. of Equipment supported – approx. 100 Workstations and 230 Mobile data terminals

---

- Awarded by ST Electronic (Info-Software Systems) Pte Ltd to provide **ICIT Management services** for a project at SCDF premises (Island-wide)

  - ❖ Year Commenced and Completed: 2011 to 2013 (3 years)
  - ❖ Scope:
    - o Manage ICIT activities (Island-wide)
    - o Manage the setup/install, deployment and commission of hardware
    - o Assist in the furnishing of hardware setup/installation guides and on-site acceptance guides. This will form as part of the quality control for this program
    - o Assist in coordinating with other subcontractors, vendors, suppliers, consultants, customers etc., on matters relating to ICIT deployment. This includes verifying of hardware delivered from suppliers to customers' premises
    - o Support the integration task performed at customer's premises. This includes re-configuration on the equipment
    - o Ensure that systematic, effective and efficient work-flows are in-cooperated and schedules are met

----

MINISTRY OF DEFENCE

SAF Simulator Centre (hereafter known as SIMLAB)

- Awarded by SES to provide **System Administration services** to project equipment deployed at SAF Simulator Centre

    ❖ Year Commenced and Completed: 2000 to 2000 (5 months)
    ❖ Scope:
        o Perform daily system administration of Sun Solaris servers
        o Perform Application and System support for a group of servers. This includes debugging and/or modifications of programming code and scripts

----

HONG KONG Special Administrative Regions (SARs) of the People's Republic of China (PRC)

Feb 2002, Antarius key professionals were invited by Singapore Technologies Electronics Ltd (Hong Kong) (hereafter known as STE-HK) to provide ICIT management and engineering services in Hong Kong. Throughout the project Design and Implementation phase, we provided STE-HK with experienced ICIT project managers and engineers to manage and deploy their equipment at all Fire Services Department premises and firefighting appliances (including fire fighting vehicles, ambulances and boat) throughout Hong Kong.

Project coverage for FIRE SERVICES DEPARTMENT (HONG KONG)

- No. of Site – approx. 120 sites (including HQs, Divisions, Fire Stations and Fire Posts)

- No. of Appliances – approx. 760 appliances (including fire fighting vehicles, ambulances and boats)

- No. of Equipment supported – approx. 240 Workstations 760 Mobile terminals

---

- Awarded by STE-HK to provide **ICIT Management services** for project with Fire Services Department Hong Kong (Island-wide)

  - ❖ Year Commenced and Completed: 2002 to 2004 (2 years)
  - ❖ Scope:
    - o Manage ICIT activities (Island-wide)
    - o Manage the setup/install, deploy and commission of hardware
    - o Assist in the furnishing of hardware setup/installation guides and on-site acceptance guides. This will form as part of the quality control for this program
    - o Assist in coordinating with other subcontractors, vendors, suppliers, consultants, customers etc. on matters relating to ICIT management; especially checking-in of hardware delivered from suppliers to customers' premises for setup/installation
    - o Support the integration at customer's premises by providing the necessary hardware and software, and may also require some configuration works to be performed
    - o Furnish extra plans or reports
    - o Ensure that systematic, effective and efficient work-flows are in-cooperated and all schedules are met

----

- Awarded by STE-HK to provide **Installation services** for project with Fire Services Department Hong Kong (Island-wide)

  - ❖ Year Commenced and Completed: 2002 to 2004 (2 years)
  - ❖ Scope:
    Off-site
    - o Image preparation – Software installation, testing, verification of image before the actual roll-out
    On-site

- o   Installment and configuration of network setting
- o   Prepare the workstation to be in a OSIR state
- o   Install and configure the workstations, mobile data terminals (hereafter known as MDT) and its peripherals
- o   Testing, troubleshooting and commissioning the workstation
- o   Prepare the necessary related documentation

- Awarded by STE-HK to provide **Operational and Maintenance Manual Technical Writing services** for project with Fire Services Department Hong Kong

    - ❖ Year Commenced and Completed: 2007 to 2009 (1 1/2 years)
    - ❖ Scope:
        - o   Cover 11 sub-systems
            - ▪   Access Control System
            - ▪   Closed Circuit TV
            - ▪   Console System
            - ▪   Digital Communication Recording System
            - ▪   Mobile Data Terminal System
            - ▪   Master Time Generation System
            - ▪   Public Address System
            - ▪   Remote Control Terminal
            - ▪   Uninterrupted Power Supply System
            - ▪   Video Projection System
            - ▪   On-Board Equipment System

- Awarded by STE-HK to provide **Operational and Maintenance Manual Technical Writing services** for project with Fire Services Department Hong Kong

    - ❖ Year Commenced and Completed: 2013 (1/2 years)
    - ❖ Scope:
        - ▪   Wireless Digital Network System

- Awarded by STE-HK to provide **Inventory Management Specialist** to manage project store housing Fire Services Department Hong Kong's equipment.

    - ❖ Year Commenced and Completed: 2008 to 2009 (2 years)
    - ❖ Scope:
        - o   Issue and receive stock
        - o   Maintain Hardcat Inventory Management System
        - o   Work closely with Helpdesk/On-site support engineers to prepare equipment to meet their operational needs.
        - o   Maintain healthy stock level to support project
        - o   Alert management when equipment reaches its low stock level

- o Generate stock reports
- o Conduct stock-take quarterly
- o Handle Return Merchandise Authorization (RMA) procedure
  - ▪ Work with In-house repair team on faulty equipment/parts
  - ▪ Correspond with vendor(s) for RMA
  - ▪ Monitor out-going and in-coming equipment/parts
  - ▪ Track RMA proceedings
- o House keep the store premise
- o Handle Stock Condemn procedure
  - ▪ Complete Condemn form
  - ▪ Seek approval (get signature or email)
  - ▪ Dispose the condemn equipment/parts

Awarded by STE-HK to provide **Consultancy services** for project with Fire Services Department Hong Kong

- ❖ Year Commenced and Completed: 2007 to 2010 (4 years)
- ❖ Scope:
  - o Project system support and optimization
    - ▪ Helpdesk support review
    - ▪ On-site RCT and MDT support review
    - ▪ Respond to fault calls review
    - ▪ Resolving faults review
    - ▪ Preventive and corrective maintenance review
    - ▪ Ensure that systematic, effective and efficient work-flows are in-cooperated and all schedules are met
  - o Inventory supportability
    - ▪ Setup Hardcat Asset Management Inventory System to manage deliverables, spares and RMA

- • Awarded by INFA Systems Ltd (hereafter known as INFA-HK) to provide **Preventive and Corrective Maintenance services** for project equipment deployed at Fire Services Department Hong Kong premises (HQ, backup HQ, Divisions, Fire Stations and Fire Posts) and appliances (fire fighting vehicles, ambulances and boats)

  - ❖ Year Commenced and Completed: 2010 to-date
  - ❖ Scope:
    - o To support their mission critical equipment deployed at Fire Services Department Hong Kong premises
    - o Respond to MDT fault calls and to rectify (includes troubleshooting, problem identification and solving where possible) or escalate to third party vendor accordingly
    - o Respond to Workstation fault calls and to rectify (includes troubleshooting, problem identification and solving where possible) or escalate to third party vendor accordingly
    - o Plan and perform yearly preventive maintenance

Site Information

- No. of Site – approx. 120 sites (including HQs, Divisions, Fire Stations and Fire Posts)

- No. of Appliances – approx. 760 appliances (including fire fighting vehicles, ambulances and boats)

- No. of Equipment supported – approx. 267 Access Points and 760 Mobile terminals

- Awarded by Synergy to carry out **Delivery, Installation and Commissioning of Hardware and Software** for the enhancement of project Communication Channel on Mobile data terminal for Fire Services Department Hong Kong (Island-wide)

  ❖ Year Commenced and Completed: 2010 to 2011 (1 year)
  ❖ Scope:
    o Delivery of Hardware
    o Installation of Hardware
    o Strategies and execute the Test Plan
    o Perform Site Commissioning Tests
    o Perform Function and Reliability Tests

- Awarded by INFA-HK to provide **Installation services** for project on Ambulances in Hong Kong (Island-wide)

  ❖ Year Commenced and Completed: 2012 to 2013 (1 year)
  ❖ Scope:
    o Support customer during product evaluation and testing phase for the Tech-Refresh exercise on MDT
    o Manage ICIT activities (Island-wide)
    o Provide manpower to setup/install, deploy and commission of New MDT
    o Assist in furnishing of hardware setup/installation guides
    o Perform on-site acceptance test with user. This will form as part of quality control for this program
    o Support the integration at customer's premises by installing/setup the necessary hardware and software, and may also require some configuration works to be performed
    o Furnish extra plans, schedules or reports
    o Ensure that systematic, effective and efficient work-flows are in-cooperated and all schedules are met

----

- Awarded by INFA-HK to provide **<u>Wireless LAN Implementation</u>** for 20x Hospitals A&E area (Island-wide)

  - ❖ Year Commenced and Completed: 2012 to 2014 (2 years)
  - ❖ Scope:
    - o Plan and deliver new hardware to the respective hospitals
    - o Install/Setup the new hardware at the respective location based on installation schedule; this will includes the following:
      - ▪ All associated building services and builder's work provision (conduits, adaptable boxes, junction boxes, electrical etc.)
      - ▪ Cabling works, hardware configuration and installation for Wireless LAN equipment (i.e. Access Points, Antenna, POE)
      - ▪ Installation of Wireless LAN equipment to existing station switch (i.e. Access Points, Antenna)
      - ▪ Cabling and connection of power extension bar for wireless LAN equipment
      - ▪ Each cable will be labelled and carry its own unique identification code
    - o Conduct Site Commissioning Tests to establish the new hardware are properly installed at the Location and are in full compliance with the Specifications

----

- Awarded by INFA-HK to provide **<u>Consultancy services</u>** on WDN for Fire Services Department Hong Kong (Island-wide)

  - ❖ Year Commenced and Completed: 2012 to-date
  - ❖ Scope:
    - o Work closely with hardware vendor to monitor the use of spare parts, maintenance supplies, and equipment. To initiate reordering when necessary
    - o Prepares and consolidate reports (e.g. CM service report submission), analyses data to support monthly reliability figure calculation, and makes recommendations for improving the day-to-day operations and solving maintenance-related problems
    - o Supervise field engineers
    - o Ensures that maintenance staff are adequately trained, equipped, and motivated so that the maintenance tasks can be accomplished in a safe, timely, and cost-effective manner
    - o Reviews the operation of equipment and systems constantly, to minimize unplanned downtime, anticipate solve problems in a timely manner, and to identify opportunities for improvement
    - o Initiates and carries out tasks that improve efficiency and/or reduce operating costs

----

- Awarded by INFA-HK to provide **Preventive and Corrective Maintenance services** on Wireless Digital Network System (WDN) for Fire Services Department Hong Kong (Island-wide)

  ❖ Year Commenced and Completed: 2012 to-date
  ❖ Scope:
    o System and equipment mission support i.e. inspection and servicing
    o Servicing which comprises of fault detection and isolation to the Assembly Level (some cases of Sub-assembly Level) and replacement of the faulty assembly and sub-assembly parts at the operating site. Remedial action to such system, sub-systems or equipment failures are performed by replacement of field replaceable units such as antenna, hand held terminals and transceiver exchange
    o Reconfiguration of the System and equipment for role changes
    o Alignment / calibration tests and system check
    o Pre-issue check of newly received assemblies for serviceability
    o Repair of sub-assemblies by replacement of parts
    o Functional checks on the repaired Equipment
    o Assist in damage investigation and Beyond Economical Repair (BER) investigation

----

Project coverage for POLICE COAST GUARD (HONG KONG)

- No. of Site – approx. 14 sites (including 6 located in remote islands)
- No. of Equipment supported – approx. 30 Workstations 50 Mobile terminals

---

- Awarded by STE-HK to provide **Preventive and Corrective Maintenance services** for equipment deployed in Police Coast Guard vessels

    ❖ Year Commenced and Completed: 2003 to 2005 (2 years)
    ❖ Scope:
      o To support their mission critical equipment deployed at Fire Services Department Hong Kong premises
      o Respond to MDT fault calls and to rectify (includes troubleshooting, problem identification and solving where possible) or escalate to third party vendor accordingly
      o Respond to Workstation fault calls and to rectify (includes troubleshooting, problem identification and solving where possible) or escalate to third party vendor accordingly
      o Plan and perform yearly preventive maintenance

Project coverage for DEPARTMENT OF HEALTH (HONG KONG)

- No. of Site – 1 site
- No. of Equipment supported – 15 Terminals

During the SARS outbreak, on 21st April 2003, Antarius Key Professional was asked by STE-HK to fly back to Singapore to learn the Infra Fever Screening System from her sister company and then to **setup, operate and maintain** the said system at the Hong Kong International Airport to curb the virus outbreak.

    ❖ Year Commenced and Completed: 2003 to 2005 (2 years)
    ❖ Scope:
      o Setup the Infra-Red Fever Screening System
      o Setup and calibrate the Thermal Vision Camera
      o Operate the Infra-Red Fever Screening System; this includes
        ▪ Screening of arrival passenger(s)
        ▪ Inform the standby medical or officiate personnel on suspected case(s)
        ▪ Coordinate and follow through with taking over from and handling over to another shift
        ▪ Pre-issue check during shift change to take over the operation
      o Maintain and perform functional checks on the system
      o Train to have knowledge transfer to staff of Hong Kong International Airport

----

KCRC Corporation (Hong Kong) – Supply and Installation of Optical Fiber Cable in East Rail

- Awarded by KCRC to provide **<u>design, manufacture, supply, deliver, installation, testing and commissioning</u>** of two 48 core optical fiber cables from Hung Hom equipment room to Lo Wu equipment room.

  ❖ Year Commenced and Completed: 2005 to 2006 (2 years)
  ❖ Scope:
    o design, supply and installation of all necessary cable containments to protect the fiber cables run in between trackside and station equipment room
    o provision of all necessary materials such as cable joints, optical fiber termination frames or panels, cable markings, labeling, cable accessories such as cable glands, connectors and associated optical fiber kits such as splice trays, splices, pigtails, protectors and patch cords etc and equipment/ machines/tools for the execution of the works
    o supply and deliver extra 6000 meters of optical fiber cable and provision of two sets of optical power meter and optical source module for future maintenance purpose
    o Supply and install one 48 core optical fiber cable from Lo Wu Telecom Equipment Room located at Platform 2 to the south end of the Bridge 38