CRISIS MANAGEMENT MOBILE CENTRE

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Keywords

Crisis Management, Crisis Management Mobile Centre (CMMC), Crisis Management Information System (CMIS), Information and Communication Technology (ICT).

Introduction

In the whole world people face up serious threats nowadays. Not only wars, earthquakes, drought but also industrial accidents strike every day. Capital of the Czech Republic, City of Prague in 2008 decided to fully renew existing information system used for Crisis Management. Its territory represents more than 1.2 million of inhabitants and its area is 496 km^2. Over 300 thousand people commute to the metropolis everyday. Local authorities requested not only renew Crisis Management Information System in the stationary Operation Centre but also newly build up its mobile part, Crisis Management Mobile Centre.

TTC TELEKOMUNIKACE, Ltd. is perceived as a company with a long tradition of developing and manufacturing telecommunication equipment. This equipment is used in the public networks of telecommunication operators and state organisations both in the Czech Republic and abroad. Because of much experience with a similar communication, TTC was addressed by the Crisis Management Information System supplier to build up Crisis Management Mobile Centre.

Thesis

Basic solutions for Crisis Management Mobile Centre proposal were defined by City of Prague Crisis Management personnel and described in the appropriate documents. All demands were discussed in the analysis phase and our effort was focused, first of all, on:
- learning all about current Crisis Management Mobile Centre (if any),
- learning all about current ICT used in CMMC and its communication infrastructure,
- learning all about current communication infrastructure,
- verifying the facts and feasibility of required solution,
- processing of final solution.

CMMC makes possible internal and external communications between all Crisis Management Personnel, work in the Crisis Management Information System environment, public information systems access and public-relation presentations.
Based on the results discovered during the analysis phase the CMMC was created as a system with the open architecture, designed as a versatile and rugged platform, ready for the future enhancement. Information and communication technology used inside is very easy managed and controlled by CMMC operator.

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Applications

As you can see on the picture bellow the CMMC system allows next functions:

- TETRA voice communications via City radio network. CMMC system is equipped by two mobile radios and five handportable radios. TETRA radio communication system is managed from the stationary Operation Centre,

- CMMC system has possibility to access and use information from the City Camera System from all over the City of Prague territory. Quality of pictures depends on line speed of data communication. These pictures are also possible to use during the public-relation presentation given by the local authorities (e.g. mayor),

- on-line access into the Crisis Management Information System environment. This application is accessible via heavy clients to all CMMC personnel,

- on-line access into all information systems of the City of Prague,

- GSM voice communications. Four GSM networks (Telefonika O2, T-Mobile, Vodafone, uFon),

- Internet access. The CMM allows system Internet access via two dedicated personal computers. Because of security reason these PCs are not connected into the local CMMC network (LAN).

- WiFi Access Point. This function allows data communication between the CMMC and Crisis Management personnel outside the CMMC system (e.g. via notebooks and PDAs),

- WiFi client/bridge. This function allows data communication between the CMMC and WiFi hot spots located on the City of Prague territory,
- IP telephony. The CMMC allows access to Crisis Management and PSTN networks.

Crisis Management Mobile Centre
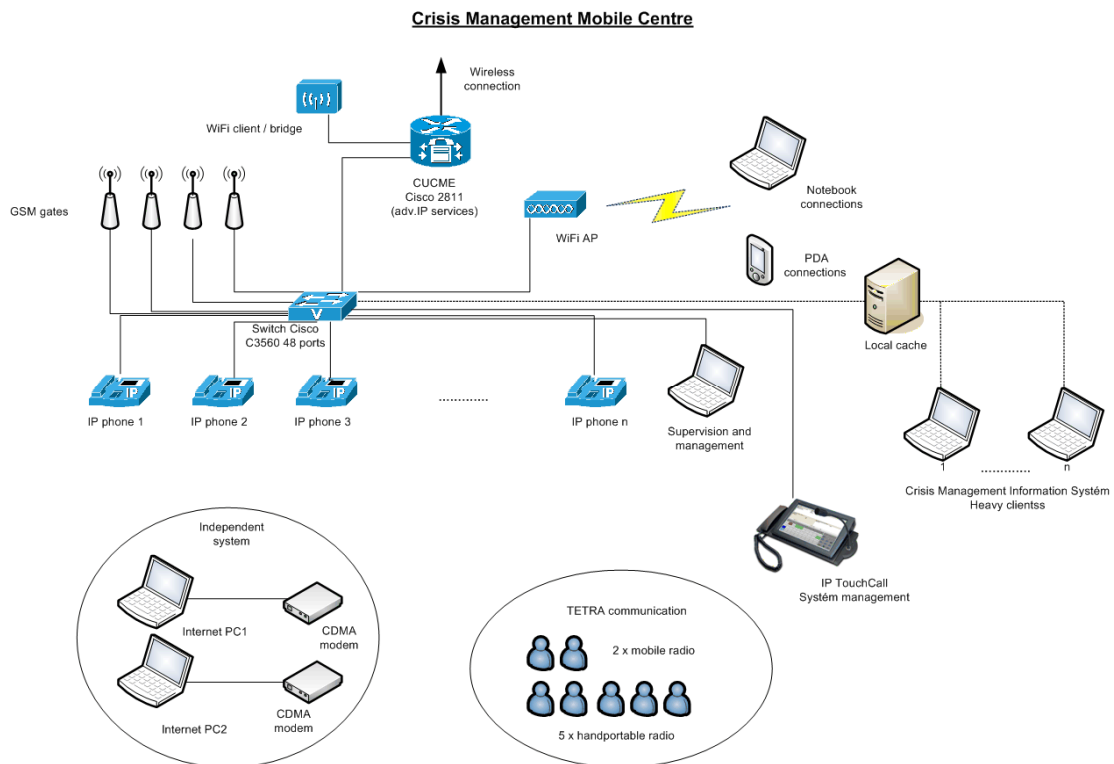
As a basic medium for data communication among CMMC and stationary Operation Centre was used DVB-RCS satellite connection. It allows 4 Mbps up/downlink transmission rate and full mobility on the whole territory. Between its capabilities belong:

- 99.6% accessibility of connection,

- high readiness,

- monitoring 24/7/365 and helpdesk,

- antenna automatic routing.

Between very important abilities belongs also spatial arrangement. In this case the CMMC was divided into two mutually connected rooms - crisis staff/public relation workplace and technological unit.

Crisis staff/public relation workplace is dedicated as a main workplace. Eleven Crisis Managers can use 11 PCs, 11 IP phones, TETRA radio communication, Internet access and LCD panel for internal need and public-relation presentations.
Core of the ICT system is located in the technological unit. The ICT operator manages all CMMC technologies from here.

Findings and Discussion

Internal security plays an important role on all levels of human life (government or municipal). Crisis Management Information System this role significantly supports. Crisis Management Mobile Centre created by the TTC company offers one of the possibilities how to save lives and property and how to minimize impact of crisis situation on inhabitant's life.

References

TTC internal paper: TTC TELEKOMUNIKACE, Ltd. (2008). Analysis and Proposal of Solution – Crisis Management Mobile Centre, Prague, Czech Republic

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Ludek STOLBA, Col. (Ret.): graduated in 1982 at the Military Academy in Brno – computer science. 1982-1991 research worker at the Ministry of Defence, 1991-2000 head of IT Department at the Civil Protection of the Czech Republic (MoD), 2001-2008 Chief Information Officer (ICT department director) at the General Directorate of the Fire Rescue Service (MoI), since July 2008 – Senior Consultant at TTC TELEKOMUNIKACE, Ltd. responsible for Crisis Management systems development.