

ISITEP

D4.5.3 - DEPLOYABLE GATEWAY PROTOTYPE

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REVISION TABLE

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Publishable extended abstract

This document provides a description of a voice and data gateway between a TETRA tactical cell and a TETRAPOL tactical cell. The solution is based on IDR for TETRAPOL part and TB3p for TETRA part.



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1. INTRODUCTION

1.1 Introduction

The aim is to provide a system to link a TETRA cell and a TETRAPOL cell in order to manage on the field two fleets of users coming from the two tactical cells. The gateway is used to interconnect voice, geolocation data and emergency information. Each cell can be extended by a connection to its own larger network using a satellite link.

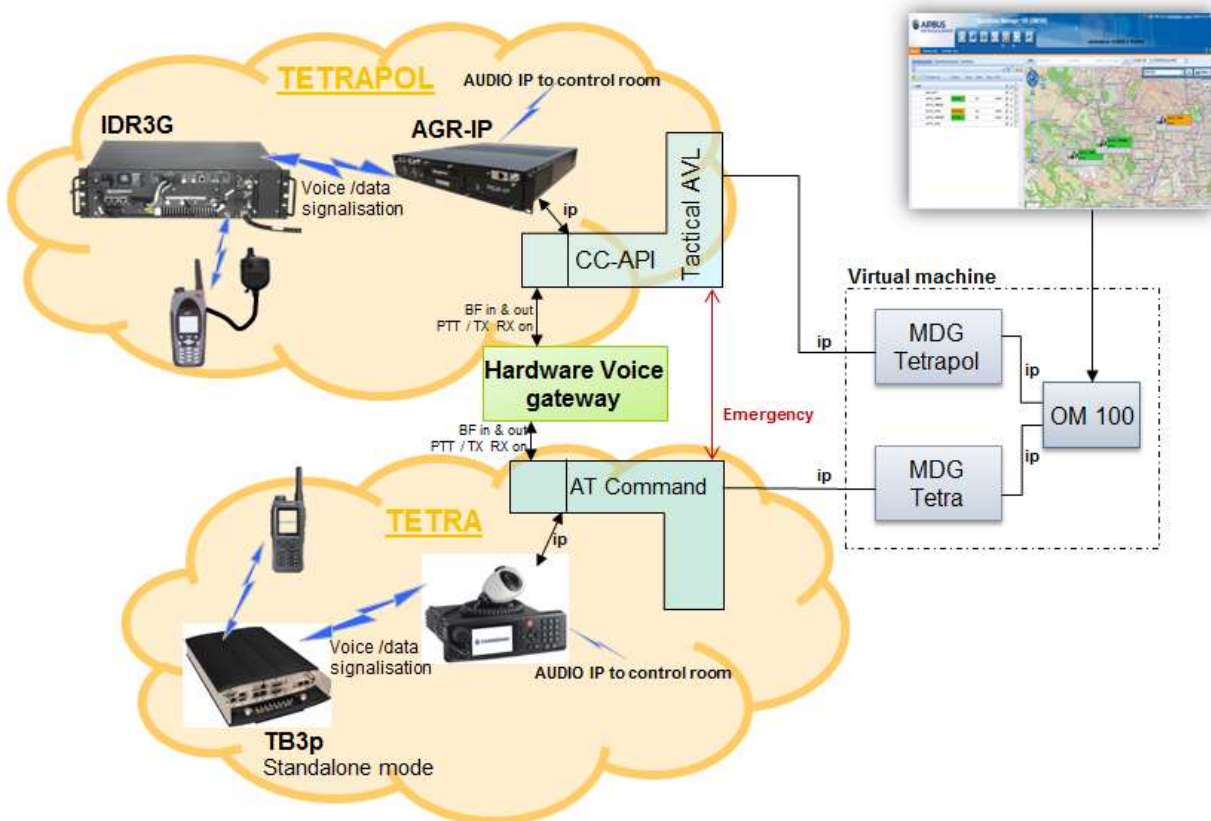
1.2 Normative reference

PAS 0001-19-2: "TETRAPOL Specifications: System Terminal Control Protocol".

TETRA Association; TETRA Interoperability Profile (TIP); Part 1: Core AT Commands

2. GATEWAY HARDWARE DESCRIPTION

2.1 General synoptic



2.2 Gateway principle:

The gateway comprises a mobile of each fleet and is used to cross the audio and the I/O (PTT, receive activity). The mobile management (communication, data interface) is done by a PC which is connected to an AVL server. The PC provides the geolocation data from both the TETRA fleet and the TETRAPOL fleet and the positions are displayed on the same map.

Alongside, the audio and geolocation data can be transmitted to the regional network by the means of an IP link (satellite, microwave).

3. OPERATING MODE

When a user takes the PTT on a terminal of his fleet (e.g. TETRA), the mobile gateway receives an activity information and transmits it to the mobile gateway of the second fleet (e.g. TETRAPOL). The received activity information is transformed to a PTT signal and the audio is transmitted to the rest of the terminals belonging to the second fleet.

At the same time, all the terminals of each fleet transmit their geolocation. The PC managing the 2 terminals in the gateway receives and routes the data to the AVL server. The latter embeds a module to compute geolocation data from both fleet and display all the information the same map.