



EDA project No. 13-115-CAP

## COLLABORATION SERVICES

### Chat Service

#### Chat Service

Collaboration among parties taking part in an operation is crucial for the success of the mission. Users need to exchange orders, tasks and reports making sure that all entities have common understanding of both the situation and the mission goal.

The solution to support collaboration among mission participants is the use of chat service. It allows to create COIs interested in particular subjects (e.g. situational reports and alarms) as well as bidirectional information relations targeted to the exchange of orders and reports.

Chat service assures privacy and confidentiality of conversations among different COIs. The access is protected by the authentication service. Each message is augmented with the security label which makes it possible to be released by border security guards (e.g. XML guard).

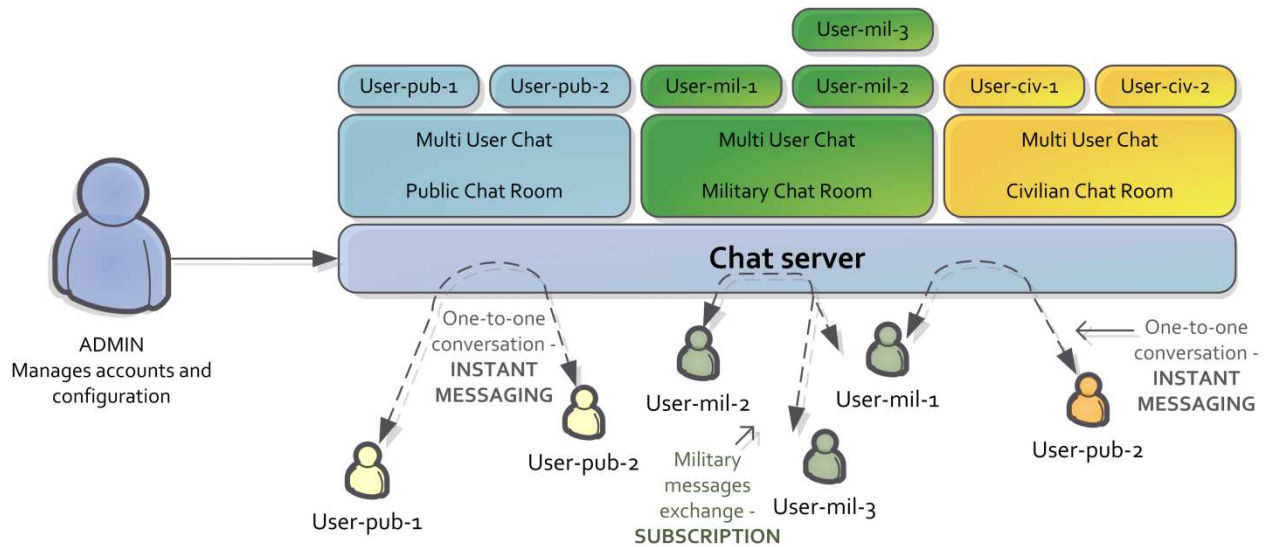
Chat service allows to transfer both structured and unstructured messages. It strongly supports collaboration with the use of instant messaging. With the use of COIs on different levels of classification it is possible to provide direct contact between cooperating civil and military units.

#### Benefits

- Supports creation of COIs and collaboration among mission participants.
- Provides possibility to send structured messages (e.g. reports, orders) and unstructured messages (free text, alarms, warnings).
- Supports presence context handling.
- Provides instant messaging among mission participants (Single Room Chat) and information distribution to subscribed users (Multi Room Chat).
- Multi Room Chat can be used to create information channels on particular topic to subscribed users (e.g. weather information, video sensors URLs, etc.).
- Supports border protection with the use of security labels.
- Supports creation of ad-hoc communication channels.

#### Architecture

- Chat service is one of the SOA collaboration services. It provides instant messaging on the basis of publish-subscribe architecture. The architecture of the solution is based on XMPP protocol, originally designed to be extensible. This makes it also useful to provide e.g. file transfer, Internet of Things applications such as the smart grid, and social networking services.



The solution is based on distributed client-server architecture. Each chat server provides the possibility to subscribe to multiple topics created in the form of chat rooms. The topics are targeted to exchange particular types of information, e.g. intel reports, tasks and orders, alarms and warnings. Different chat rooms are created also based on confidentiality of the data granting access only to users with appropriate credentials.

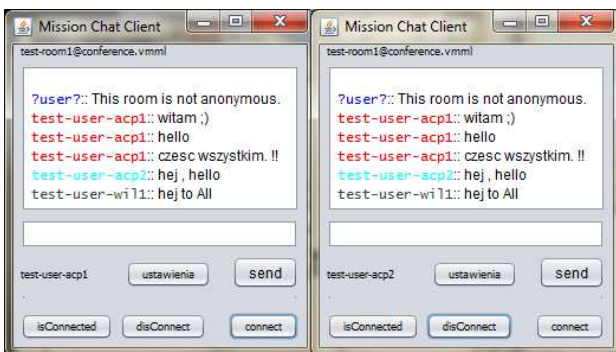
Chat service is based on the following standards and solutions:

- Asynchronous statefull communications
- User presence context handling
- Extensible Messaging and Presence Protocol (XMPP) based on XML
- SASL or TLS encryption

TRL: 6.

### Technology provider

Service provided by Military Communication Institute.



### Technology



Demonstration of Shared situational awareness in EU led Crisis Management Operation was delivered by a consortium led by Asseco Poland SA (Poland) and comprised of Military Communication Institute (Poland), Military University of Technology (Poland), ITTI Ltd (Poland), Filbico Ltd (Poland) under the European Defence Agency project No. 13-115-CAP.

**UE NEC Demonstration** - PT NEC initiative for a collaborative project between EDA and pMS to host a practical demonstration of operational relevance of NEC started in late 2010. Out of 7 pMS proposals, Polish consortium was selected with "Shared Situational Awareness in EU-led CMO" demonstration. Project started in January 2013 with the demonstration planned for 27/28 November 2013 in Warsaw.

The demonstration scope included: Presentation of CSDP driven EU-led CMO scenario; Presentation of capabilities prepared by Polish consortium members to form a distributed CIS/C2 environment, as a configuration of their selected IT assets (PL NEC). These capabilities included inter alia situational information presentation (pictures and portals), knowledge management, information assurance and cyber threat identification & assessment; simulation of three operational episodes: Civ/mil response to IED incident, Ad-hoc civ/mil collaboration and Terrorist threat identification and response; Demonstration of PL NEC architecture, services and tools.

NEC Demonstration was provided by a consortium led by Asseco Poland S.A. with partners: Military Communication Institute, Military University of Technology, iTTi Ltd. and Filbico Ltd.

 **International Organization and Security Sector Solutions Department of Asseco Poland SA** specialises in designing and development of specialised military and double use software including advanced security solutions. As a member of the largest software house with Polish capital and seventh largest software house in Europe, we are proud to successfully compete with the worldwide market global companies and provide services to NATO, European agencies and other international organisations. We have successfully passed a SCAMPI-A formal appraisal which confirmed that all processes adopted by PRW were implemented on the Level 3 of CMMI-DEV.



**Military University of Technology** is the largest military academic facility in Poland, providing educational, research and development capabilities to Polish Armed Forces and government institutions. Cybernetics Faculty was founded in 1968 in response to the growing demand for specialists in the domain of computer systems and in particular decision support, computer simulation, cryptology, operational research and methods to assist the decision-making processes of military commanders. Scientific research has been applied in many products deployed for Polish and foreign DoDs providing software and hardware components (Military Decision Support Systems, HLA based virtual and constructive simulators, cryptographic modules, crisis management tools).



**Military Communication Institute** is an R&D institute supervised by Ministry Of National Defence, funded in 1951. It realizes researches and development projects inter alia in the area of cryptographic and electromagnetic protection, information assurance, cyber defence, building C4I systems' mechanisms and services, communication systems, radio-communications, reconnaissance and electronic warfare systems. Many of the MCI products are applied in practice and fielded in Polish Armed Forces. MCI has ISO and AQAP certificates, Ministry of Interior licence and 1st degree certificate of industrial safety (EU, NATO SECRET and national up to TOP SECRET).



**Filbico** is an engineering company which provides the Information and Communication Technology solutions for forces and uniformed services. The company supports the full life cycle of ICT systems: from research up to the maintenance. Our business areas are the air traffic control and management, cyber security, crisis response, command and control as well as fire control. Filbico's capabilities are recognized in several certificates required to successfully develop mission critical systems for military customers. Web page: [www.filbico.pl](http://www.filbico.pl).



**iTTi Sp. z o.o.** is a private company focused on technical consulting and applied R&D in the area of IT and telecommunications as well as on development of innovative applications and software solutions. ITTI has been working in EU Framework Programmes, PASR, EDA projects (e.g. JIP-FP) and in NATO Industrial Advisory Group studies. ITTI has been awarded the prestigious "Cristal Brussels Prize 2010" and has received an award for the high performance in R&D projects for European Defence Agency granted by Polish Ministry of Defence. ITTI is a member of the following international organisations: PSCE, IMG-S and ITIC Group.