



# COMBINED ENDEAVOR

**BOSNIA AND HERZEGOVINA  
MINISTRY OF DEFENSE  
ARMED FORCES B&H**

**Banja Luka,  
September 4 - 17, 2009.**



BOSNIA AND HERZEGOVINA MINISTRY OF DEFENSE ARMED FORCES B&H

## COMBINED ENDEAVOR C<sup>4</sup> INTEROPERABILITY

- **COMBINED ENDEAVOR** is an annual exercise of C4 integration and interoperability, under the sponsorship (USEUCOM), in the spirit of the „Partnership for Peace“ (PfP).
- CE reaches military and telecommunications equipment interoperability between NATO and PfP member countries – developing common multinational operative networks.
- The principal aim of the CE is to enable participant countries to rapidly and effectively integrate their telecommunications systems as a segment of coalition forces.
- This is achieved by educating the exercise participants, by operative testing, documentation and training of technical and procedural solutions.

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■ **EXERCISE AIMS**

1.

**Testing the mutual work of the tactical communication and information systems (CIS)**  
(including NATO and commercial standards)

2.

**Developing the efficient architecture network which supports the command and control of the coalition communication networks.**

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### ■ History of the exercise „COMBINED ENDEAVOR“.

„Combined endeavor“ is an exercise that was organized in 1995 in Germany for the first time, and in which the equipment and personnel from ten countries participated. Already in 1996, systems and equipment from 12 nations take part in the exercise, in 1997 16 nations, and in 1998 the exercise reaches 29 integrated national networks.

In 2001, the exercise includes 37 nations, and the focus is on small structured operating networks.

In 2004, the exercise reaches 40 nations, and the focus is on protected networks.

The year 2008 is the last year in which the exercise was held in Germany, and in which 42 countries participated.

The following activities have been performed through history:

- outworn analog technology – digitalization – network operations
- testing of new equipment has been accepted,
- partners educate about interoperability guidelines in liaison schools,
- partners develop procedures for C2 reporting during engagement/employment

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Experiences from the exercises have been used in the following missions and operations:

- France, Russia and Italy deployed in UN Mission in Lebanon, with the Interoperability Guide (IO Guide 2006)
- UK, Lithuania and SEEBRIG preparations for ISAF (2005)
- NATO's efforts in helping the earthquakes situation, Pakistan (2005)
- Armenian-Moldavian radio networking in OIF, Iraq (2005)
- Switzerland, aid in air control during the tsunami (2005)
- USCENTAF and Italian network integration Talil AB, Iraq, OIF (2004)
- Interoperability Guide /SE, aim for the integration of Poland MND into OIF (2003)
- Continuous work with multi-standards (STANAG, e.g. 5066 HF DATA Standard)

Bosnia and Herzegovina commenced its participation in the exercise in 2006 in observer status, and the delegation of 4 members of AF participated in this activity

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In 2007 BiH attains the active participant status and participates with the delegation of 15 members of AF BiH and HARRIS RF 5800 device,

Pursuing the TESTNET Work Plan, ten announced and planned tests have been performed, as follows:

- USA (2 tests), FIX and ALE with HARRIS RF 5800 equipment
- Slovakia (3 tests), ALE and DATA with RHODE-SWARC equipment
- Sweden (4 tests), ALE and DATA with SELEX HF-2000 equipment
- Romania (1 test), DATA with HARRIS RF 5800H equipment
- Unofficial tests with the following participants:
  - Croatia, DATA with RU TALIS equipment, HARRIS 5710 Modem
  - Slovenia, FIX, ALE and DATA with HARRIS equipment and HARRIS 5710A Modem
  - SEEBRIG, 3G with HARRIS RF 5800 equipment,
  - Afghanistan, ALE with DATRON equipment,
  - Albania, 3G with HARRIS RF 5800 equipment,
  - Poland, all types of operation with HARRIS RF 5800 equipment

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■ **LESSONS LEARNED FROM THE EXERCISE**

**HARRIS RF 5800 equipment owned by the Armed Forces of BiH is compatible and completely employable with all RU versions, when the other side uses HARRIS 5710 or 5710A Modem and WMT ver. 6.0.2. Software.**

**HARRIS RF 5800 equipment owned by the Armed Forces of BiH is not completely employable with other radio systems when it comes to data transfer (certain restrictions remain).**



# COMBINED ENDEAVOR

*United*

*on the road  
to NATO*

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