

Dynamic Scenarios Application in Augmented Reality for the NAFTES Project

The Dynamic Scenarios application within the NAFTES project enables Naval and Marine Navy instructors to create dynamic scenarios and content for their own needs. This app has been developed for mobile devices that support Android operating system.

The process for creating dynamic scenarios is provided on the platform of the NAFTES e-learning platform (<https://etraining.naftes.eu/main/toolbox.php>). Each lesson has the option in the Dynamic Scenarios menu. In this area, you can print a file containing qr codes that correspond to desired files uploaded by a trainer. Each trainer prints these qr codes and places them wherever he desires according to the content he wants to be displayed.

The content being viewed is an image or video format and is placed above the qr code from the application.

We would like to highlight some features that have to be taken into account by trainers in order to optimize the quality of the application.

- 1) qr codes must be placed in points that are sufficiently lit. The application (internally in its functions) takes a snapshot from the camera (photo) when it has decoded the qr code successfully. Then download the content from the internet and project it over the surface of the printed qr code. In a subsequent scan of the qr code, it uses the saved snapshot to identify what content to display. If the quality of these snapshots is poor (from low light, poor viewing angle, etc.), then the content may not be displayed correctly.
- 2) The mobile device is required to access the Internet. Otherwise, the content to be viewed can not be downloaded.