**Ukrainian Radio broadcasting system on mobile apps**

Work Statement

1. Broadcast server

IP-based broadcasting should be built on the open platform ICECAST. It is expected that the current resource will be used.

2. Mobile apps

There are currently no apps to service UR’s listeners (with the exception of a very plain experimental App for UR-3/kulura which is a good effort but doesn’t fulfil professional standards). The programming of an app which makes all 4 UR channels available to any mobile user ist strongly recommended. The main requirements of such an app are:

* The usability is to reflect upon international UX standards (Spotify, Apple Music, BBC etc.).
* The app should cater for static content pages as well as a dynamic player.
* The player and the static pages should have possibility to display the channel / radio station logo.
* The app must be available for iOS and Android (no version limits)
* The app consists of 4 tab-players with metadata support.
* It is expected that players should play ACC+ format streams, should have dynamic buffering options (minimum: 2G and 3G) depending on communication channel type
* The app must have possibility to catch up the transmission after internet connection faults (automatic reconnect).
* File format should provide availability of 3 information blocks:
  + 1. previous program
  + 2. next program
  + 3.current program.
* Regarding the current program there must be the following info:
  + host
  + title
  + start time
  + playback type (live, deferred, on-site transmission, announcement and ads).
* The app should preserve the last channel that has been played.
* The app should not take storage or update metadata when the playback button is switched off.
* The player should have possibility to load metadata of the program which is broadcast via dedicated page <http://www.nrcu.gov.ua/metadata.txt>. This page is fed by a CMS from NRCU’s side.
* Metadata updating goes on every 30 sec.
* Metadata updating and auto adjustment of playback quality can be switched off by menu buttons.
* The ping (ICMP request) on ICECAST server could be a channel test. The test must be carried out where there is zero on audio buffer.
* There should be possibility of feedback in a separate window
* there should be a field for entering a message and which reads the the Apple-ID for IOS or GMAIL for Android while message preparation.
* The sending of the message is provided by sending PHP request to a web server that, in its turn, sends e-mail according to the given algorithm.
* Each PHP request includes sender’s name (Apple ID for IOS or GMAIL for Android), message, metadata clipping on the current program (host, title, start time), message body, playback type.
* The user should get the info regarding impossibility of connection to web server on screen (via push message? Colour of app? Other?).
* Unavailability of links to metadata resource should not result in breaks in audio signal playback.