

# VLC Expert Review

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## 1 Introduction

This document is a report of an expert review on the topic of VLC on Android (for the website, see <http://www.videolan.org/vlc/>). VLC is a popular and free application that allows video and audio playback, aiming to support many different audio/video compression methods and file formats. The software is written by the VideoLAN project and is open source; released partially under the GNU GPLv2, and partially under the GNU LGPLv2.1 licenses. It is available in 48 languages, and has been ported to several platforms, including a version, still in the beta-phase, for Android, which will be the only application considered in this expert review.

This review is based on three target users covering a significant portion of the target audience for this application. From the perspective of these persons, several tasks have been performed that are, in certain cases, significant for these persons. The execution of these tasks are analysed according to Jakob Nielsen's ten usability heuristics, found at <http://www.nngroup.com/articles/ten-usability-heuristics/>. These ten heuristics, as found on this website, are as follows:

- **Visibility of system status:** The system should always keep users informed about what is going on, through appropriate feedback within reasonable time.
- **Match between system and the real world:** The system should speak the users' language, with words, phrases and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order.
- **User control and freedom:** Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Support undo and redo.
- **Consistency and standards:** Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions.

- **Error prevention:** Even better than good error messages is a careful design which prevents a problem from occurring in the first place. Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action.
- **Recognition rather than recall:** Minimize the user’s memory load by making objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate.
- **Flexibility and efficiency of use:** Accelerators – unseen by the novice user – may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.
- **Aesthetic and minimalist design:** Dialogues should not contain information which is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.
- **Help users recognize, diagnose, and recover from errors:** Error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.
- **Help and documentation:** Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user’s task, list concrete steps to be carried out, and not be too large.

## 2 Target Users

Android comes with its own pre-installed audio and video player, which is sufficient for most common audio and video formats. Hence, most audio and video files stored on the phone can be readily played intuitively, limiting the target audience to people who either dislike the original application, or find it lacking either functionality, file format or compression methods that VLC does implement.

The following sample of three users cover a broad range of this target audience:

- **Barbara** is a 21 year old college student, having not much more experience with computers than she requires: she browses the web, writes word documents, occasionally plays The Sims, and, as she likes watching tv, commonly downloads movies or series. She has an Android HTC One, on which she regularly uses WhatsApp, the webbrowser and several other apps.

For a few months already, nearly every weekend, she travels back and forth to her boyfriend, who lives a two hour train ride away. These hours of travel she often finds particularly boring and, in order to entertain herself, she wishes to watch a movie or listen to music even though she lacks a tablet or laptop. She wishes to use her phone to do so, but it lacks support for several file formats of movies she tends to download. Hence, she has just transferred a movie to her phone, and installed VLC, and has just entered the train for her next two hour ride.

- **Grant** is a 23 year old computer “power user”. He’s been programming and playing around with computers for a dozen years already and dual boots between Linux and Windows for whichever suits his needs at the time. On Linux, his audio player of choice is VLC.

While Grant is an expert computer user, he is by no means an expert smartphone user: in fact, he only just acquired his new Samsung Galaxy S4, as his new girlfriend pushed him into buying one after countless SMS messages back and forth. He already found he dislikes the media player that comes with Android, and decides to give VLC a try as an alternative.

- **Steven** is a 54 year old Siemens employee. He lives together with his wife; his lone kid has moved out two years prior. While he and his wife aren’t technological experts, they stay fairly up-to-date with new technology. Recently, they bought a tablet: the Galaxy Tab 2. Occasionally, they would like to be able to watch videos and movies on their tablet, but find the native video application lacking in support for some video formats. They decide to give VLC a try.

### 3 Tasks

The expert review has been preformed by trying to execute several tasks. These tasks are as follows:

- **Watching a movie:** In the directory “/mnt/sdcard/reviewfiles”, there’s a video file called “Mr.Nobody.mkv” with subtitles in the file “MrNobody.srt”. However, the subtitles are slightly off in timing, and the audio and video aren’t properly synchronised either. Play the movie, and synchronise audio, video and subtitles.
- **Playing music:** In the directory “/mnt/sdcard/reviewfiles”, there are three directories, “Tessa Rose Jackson - Songs From The Sandbox”, “Andy Burrows - Company” and “Poets of the Fall - Temple of Thought”. Each of these directories is a CD that contains MP3 files. Create a playlist that contains only the files from the first two directories, then search for the song “Andy Burrows - Hometown”. Play it, put it on the bottom of the playlist, and turn on repeat.

Then, add the song “Poets of the Fall - Carnival of Rust.mp3” in the directory “/mnt/sdcard/reviewfiles/Poets of the Fall - Temple of Thought” to the playlist and make sure the rest of the playlist is played in random order. Also, turn up the base.

- **Streaming video playback:** Play the video stream found at the URL <http://www.nasa.gov/multimedia/nasatv/NTV-Public-IPS.m3u8>.

## 4 Results

These are the results of the tasks:

- **Watching a movie:** Barbara and Steven both opened the video tab and found the video by scrolling or searching. Grant opened the directories tab and found the video, browsing straight to its location on the filesystem. Barbaras phone stutters heavily while trying to play the video. After a little searching all three find the option to load a subtitle file. The directory browser looks different this time. They succesfully add the subtitles. None of them can find synchronization options for audio or subtitles.
- **Playing music:** Only Grant managed to create a playlist, but only after a good bit of searching. The fact that they needed to first play a song, and that that creates a playlist wasn’t intuitive for them at all. They also had to search for how to switch to the Albums tab from Artists. Playing the song was easy after they reached the Albums tab. At this point, it also became clear that VLC isn’t consistent with their features across different android versions. Changing the order of songs in a playlist, or putting a playlist on repeat proved to be impossible for Grant, as the newest app version was not available for his android version yet. The option to order songs by length or name was clearly displayed in the context menu, so all of them could find that option.
- **Streaming video playback:** Steven finds the option pretty quickly, types in the url and starts the stream. Grant has some trouble finding the option to open a stream, but finds the button by systematically going through all buttons on the main screen. He remembers the right button for the next time. Barbara is unable to figure out how to open a network stream. In all cases, once opened, the stream plays properly.

## 5 Conclusions

These are our conclusions:

- **Visibility of system status:** The app indicates when it is loading a list of movies or songs. However, when a movie completely stops playing, there is no indication why.

- **Match between system and the real world:** We tried changing the language to Dutch, German, French and Icelandic, they all worked. The terms used to describe the features are a bit technical, but no different from other media apps. Where the terms get too technical, the app offers a decent explanation.
- **User control and freedom:** The only thing you can't undo in the app, is removing a subtitle from the list after you added it. Deselecting it is an option, so this is no real problem. Redo isn't a separate option, but the user can always redo everything by following the same path they did before.
- **Consistency and standards:** The file browser used in the app is not consistent, the one for the subtitles is different from the one in the main screen.
- **Error prevention:** The app frequently crashes, without giving off any form of error message.
- **Recognition rather than recall:** Several of the buttons have items that don't make it obvious what they do, which means people need to search around to find that option and then remember where it is.
- **Flexibility and efficiency of use:** The app is very flexible. Efficiency only comes in when the user has performed an action before, because not all of the features can be found that easily.
- **Aesthetic and minimalist design:** It has a functional look, with the advanced settings hidden so that the average user won't get confused by them. This app has a good, minimalistic design, however some icons could use a descriptive text.
- **Help users recognize, diagnose, and recover from errors:** When the app crashes, there never is an error message, so no diagnosis nor recovery is present.
- **Help and documentation:** For those users that want to do more than average with VLC, there is a clear explanation for every option in the settings menu. Otherwise, there is no help or documentation available, nor is there for basic functionality.

In general, VLC has some nice and advanced features, but at the same time lacks several basic features, like easily editing a playlist.

## 6 Suggestions

The best suggestion we can do is to stop putting a lot of effort into neat features and start putting more effort in important basic features, like proper playlist editing.