

# Peer Review – Classification of USB-Based Attacks

## Summary

This paper discusses the technology of security threats that use USB device as a medium. In this paper, the writer also discusses the versions of USB protocol and their differences. In this paper, the writer goes through three types of attacks, modified hardware attack, host-software attack, and unexpected functionality attack.

This paper is recommended for anyone who has interest in hardware-side vulnerability, particularly in the scope of USB devices. The explanation is light and thus does not require a deep understanding of the mechanism of USB device.

## Strength

- This paper discusses the mechanism of USB, giving the reader a good background and base for the latter part of the paper
- This paper uses tables to make the comparison between USB versions easier

## Weakness

- In the table in Figure 1, there is `max. power` column but this column is not discussed anywhere.
- The explanation about USB enumeration is unclear, specifically in the last paragraph of II.F.
- The structure of the paper is unclear or not communicated properly, for example, in sections IV.A, IV.B, and IV.C.

## Comments

- Remove “170-250 words” before abstracts.
- Some citations are incorrectly rendered in the paper.
- The content of this paper seems to be not fully done.

- Several personal notes and todos need to be removed.
- Consider aggregating several subsections into one if each subsection is very short.
- In I: the acronym USB should be introduced earlier.
- In I: The sentence fragment “the first in this study within 6 minutes” has unclear meaning.
- In I.A: A new subsection is not required for listing the contribution of the paper except if it is explained through paragraphs.
- In II.A: The first sentence after the headline is too long, consider separating it.
- Figure 1: The column `max. power` seems to be irrelevant to the discussion and can be removed.
- In II.B: The subsection is too short and can be combined with other sections.
- In II.B and II.C: The comma used in the subsection title does not serve a clear purpose.
- In II.D: Typo in “the USB host always has to *iniciate* the transfer”
- Figures 2 and 3: Please cite the source of the image.
- Figures 2 and 3 are attached, but there is no part in the text that explicitly refers to them.
- Subsection II.F: This topic should be discussed first before discussing II.C, because the term “enumeration” is used in II.C.
- In II.H: The first paragraph is too long, consider separating it.
- Subsection II.H: It is recommended to discuss this topic first before going through other topics of USB because previous explanations use several terms introduced in this subsection.
- In IV: The name of the category and its explanation shall be divided with a colon (:).
- In IV: The explanation of each category can be put in each subsection for each category, the first paragraph can be used to only mention or enumerate them.
- In IV.C: The numbering is unclear, the number 3 precedes number 2.
- Listing 6: Missing source of data (not the path of the file, but rather query source).

- Section V: Empty. If a section is not required, it can be removed from the paper.
- The bibliography entries are displayed incorrectly.