



# Exploiting the hard-working DWARF

## Trojan and Exploit Techniques With No Native Executable Code



# Agenda

Sources



## DWARF Summary

- ▶ Old school: typical exploitation techniques are trying to insert shellcode (since 1980's)
- ▶ Newer: trying to "borrow" necessary executable code snippets from target (end 1990/early 2000)
- ▶ Current: generalization, s.t. Turing-completeness is achieved (ROP)
- ▶ Other kinds of exploitable bugs: Int-overflow, parsing (mis)interpretation...
- ▶ **DWARF exploitation** as an alternative exploitation technique
  - ▶ In despite to return oriented programming (ROP) which is using its native code
  - ▶ DWARF allows an attacker to create a trojan payload for ELF executables without any native binary code.



# Sources I