

# ***Out of Tune? Investigating Youtube's Copyright Enforcement***

***Stefan Bechtold***

ETH Zurich

*Sverrir Arnorsson (University of Zurich), Christian Peukert (University of Lausanne) (co-authors)*

The scale of user-generated content platforms such as YouTube requires automated copyright enforcement to avoid, or at least minimize, copyright violations. YouTube's Content ID processes over 950 million copyright claims annually and distributes billions in revenue to rights holders. We present a large-scale empirical evaluation of Content ID, systematically assessing its accuracy across different types of copyrighted works. After uploading several thousand videos to the platform (in a private mode), we observe that while the technology behind Content ID is advanced, the institutional arrangements that govern the system are not without flaws. This manifests in an over-enforcement rate of 45% driven by copyright trolls – i.e. videos get flagged for copyright violation in cases they should not -- and an under-enforcement rate of 45% – i.e. videos do not get flagged in cases they should. Additionally, Content ID fails to account for regional variations in copyright protection. Major labels demonstrate more effective utilization of Content ID compared to independent ones, resulting in more effective enforcement of major labels' content. Our findings suggest that these enforcement imbalances are primarily attributable to YouTube's Content ID access policies. We discuss the broader implications on automated content moderation and platform governance, demonstrating how neutral technologies can amplify existing power disparities.