

Chess Engines: How to Make Chess Accessible to the General Public
(Technical Report)

Game of Phones: The Competition over Devices and Children's Social
Development

(STS Research Paper)

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by

Stephen Johnson

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Preface

How may inclusive access to digital tools be improved without promoting the associated hazards of excessive or harmful use?

In 2020-21, as the coronavirus pandemic kept people at home, chess surged in popularity. Due to technical or cost constraints, however, many digital tools that chess players may value were inaccessible to them. As an accessible alternative, an application is therefore proposed. It would run in Docker, a chess engine and user interface, and function either locally or deployed to the web. The architecture would be a ReactJS user interface and a Java Spring Boot backend service connected using WebSockets. To pay for hosting and compute power, the proposed engine would be easily monetizable through Google AdSense. Using a series of algorithms for building efficient tree data structures, the engine can be incrementally improved over time.

To increase advertising revenues, most social media companies seek to maximize user engagement. User engagement techniques can favor harmful content and promote compulsive use, to the detriment of all users. Children, however, are especially vulnerable. Advertising revenues incentivize companies to keep users online as long as possible. Many parents and psychologists agree that such policies can make social media harmful to children. Children who use social media are vulnerable to social media addiction, body image anxieties, and political extremism. Many parents and psychologists criticize social media companies' practices, contending that they expose children to grave risks and must therefore change. To resist change, social media companies typically do not deny the risks. Instead, they publicize their parental control tools, arguing that because the tools empower parents to protect their children, parents, not companies, are ultimately responsible for their children's social media use.