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Quantum censorship—and how to get around it

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We may soon see agencies offering public access to quantum communication networks. To prevent the unregulated spreading of quantum resources to malicious parties in their preparation of cryptographic attacks, governmental agencies might try to establish a quantum censorship. In such a protocol, quantum states which are deemed benign cross a network unaltered while hazardous quantum states are rendered classical. A less dystopian—but an information-processing equivalent—scenario might be the censorship of a commercialized network, with a provider offering free transmission of classical information, but demanding premium fees for sharing quantum information.

In this talk, I introduce quantum censorship, a protocol in which an all-powerful agency oversees quantum communication in a public-domain network. Because of the decentralized nature of such networks, collaborating users might try to bypass censorship and I discuss under which conditions the censorship protocol is unbreakable.

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