Patents and Quantum Computing: Lessons from Emerging Technologies

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September 11, 2018
Outline

1. Background on Patents
2. Examples of Patents and Emerging Technologies
   - Computers
   - Medical Technology
   - 3D Printing
   - Interoperability Protocols
3. Lessons for Quantum Innovation
   - Solving the Early-Stage Slowdown
   - Expertise in Examination
   - Role of Innovators
What Do Patents Do?

The good:
- Financial incentive to invent
- Facilitate tech transfer, JDAs

The bad:
- Incumbents pressuring small startups
- Opportunistic litigation
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3 Lessons for Quantum Innovation
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   - Role of Innovators
Computer and Internet Technology

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Pharmaceuticals and Medical Devices
Communication Protocols
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Solving the Early-Stage Slowdown

- Private licensing arrangements
- Impact of national security concerns?
- Open approach to basic research—including hardware
Expertise in Examination

- Educating examiners on technology
- Allocating time and resources for examination
- Making non-patent literature available
Role of Innovators

- Let innovation drive patenting, not the other way around
- Consider the roles of all forms of IP (especially trade secrets)
- Seek well-written, well-defined patents