Out of Sight, But Not Out of Mind: Security and Privacy of Bionic Eyes

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Bionic Eyes – Implanted Visual Prosthesis
Inner Workings of a Bionic Eye

1. External image processing component
2. Surgically implanted component
3. Component enabling wireless communication
Project Prakash and the Future Sight Restoration

[Picture credit: projectprakash.org, Science Magazine]
Bionic Eyes of The Future
Bionic Eyes = Augmented/Virtual Reality

Difference: surgically implanted component

[Picture credit: allaboutvision.com, gameranx.com]
Bionic Eye = AR/VR

Uses of bionic eyes in the future:

1. People who were born blind
2. People who have suffered a sudden loss of sight
3. People experiencing visual degeneration
4. People wanting to enhance their normal vision
Future Bionic Eyes: Possible Problems

- Sense of self and agency
- Legal responsibility
- Privacy
- Safety and security
Gas Lighting Attack – A New Problem

[Picture credit: urban75.org]

Attack targeting the content of delivered messages
Thank you!

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