



## Physical Security

Stephen  
"ToxicSauce"  
Walker-  
Weinshenker

# Physical Security

## or "Why is that man in my server room"

Stephen "ToxicSauce" Walker-Weinshenker

Department of Computer Science  
Colorado State University

Department of Electrical and Computer Engineering  
Colorado State University

October 3, 2016

## Physical Security

2016-10-03

Physical Security  
or "Why is that man in my server room"

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October 3, 2016



# What is Physical Security

Physical  
Security

Stephen  
"ToxicSauce"  
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- ▶ Controlling physical access to something
- ▶ Normally used in the context of a building or room

## Note:

Any type of Security is a balance between security, convience of access and aesthetics.

## Physical Security

2016-10-03

### └ What is Physical Security

1. there is no perfect security

- ▶ Controlling physical access to something
- ▶ Normally used in the context of a building or room

**Note:**  
Any type of Security is a balance between security, convience of access and aesthetics.



# Primary Elements of Physical Security

Physical  
Security

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- ▶ Physical Structure of Building and Site
  - ▶ Doors
  - ▶ Windows
  - ▶ Walls
  - ▶ Roofs
  - ▶ Floors
  - ▶ Perimeter of Property

## Physical Security

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### └ Primary Elements of Physical Security

- ▶ Physical Structure of Building and Site
  - Doors
  - Windows
  - Walls
  - Roofs
  - Floors
  - Perimeter of Property



# Primary Elements of Physical Security

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- ▶ Secure Elements of Building
  - ▶ Locks and Keys
  - ▶ Other Access Control
  - ▶ Man Traps
  - ▶ Vehicle Gates

## Physical Security

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### └ Primary Elements of Physical Security

- ▶ Secure Elements of Building
  - ▶ Locks and Keys
  - ▶ Other Access Control
  - ▶ Man Traps
  - ▶ Vehicle Gates



# Human Factors

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Security

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- ▶ Security Guards
- ▶ Other Employees

## Physical Security

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### └ Human Factors

▶ Security Guards  
▶ Other Employees

Human Factors



# Security Guards

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## Physical Security

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### └ Security Guards

1. is there a way around the guards
2. how attentive are they
3. are they distracted
4. can they be distracted

Security Guards





# Other Employees

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### └ Other Employees

1. tailgating
2. social engineering
3. bribery

Other Employees





# Doors

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- ▶ frame gap
- ▶ REX sensor
- ▶ lock — fail safe or deadly
- ▶ hinges
- ▶ door fit



## Physical Security

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### └ Doors

1. <https://www.youtube.com/watch?v=SD14A04ancI>

Doors

- ▶ frame gap
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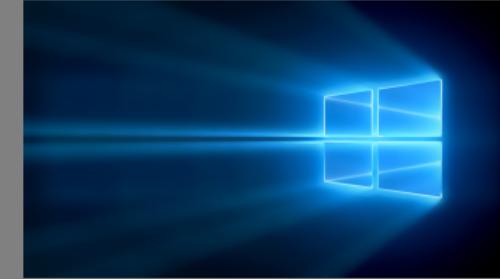
# Windows

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Fooled you

No not this windows



## Physical Security

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└ Windows

1. blinds
2. potentially bars, don't want to appear that you are protecting something
3. security film/glass/fire rated glass
4. windows higher up on wall, without ledges

Windows

Fooled you  
No not this windows





# Windows

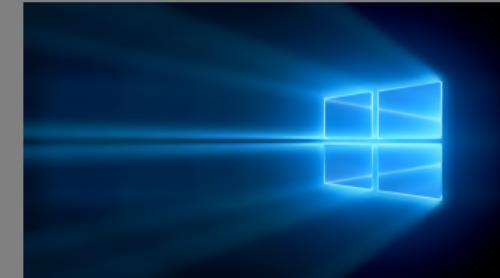
Physical  
Security

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"ToxicSauce"  
Walker-  
Weinshenker

Fooled you

No not this windows

These windows



## Physical Security

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└ Windows

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Windows

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# Walls/Roofs/Floors

## Physical Security

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- ▶ solid construction. Tissue paper != secure
- ▶ for roofs, steep slopes are harder to stand on
- ▶ skylights instead of windows except in case of helicopters
- ▶ think about mechanical equipment on roof as another access point / potential attack surface

## Physical Security

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### └ Walls/Roofs/Floors

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Walls/Roofs/Floors



# Perimeter of Property

## Physical Security

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- ▶ vehicle gates
- ▶ natural vegetation
- ▶ open areas between buildings and surroundings



## Physical Security

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### └ Perimeter of Property

Perimeter of Property

- ✖ vehicle gates
- ✖ natural vegetation
- ✖ open areas between buildings and surroundings





# Locks and Keys

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- ▶ most locks are shit
- ▶ almost all padlocks are shit
- ▶ good locks are not infallible
- ▶ master keys/recorarble locks
- ▶ keyboxen — knox boxen

## Physical Security

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### └ Locks and Keys

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# Other Access Control/CCTV

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└ Other Access Control/CCTV



# Man Traps

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Security

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└ Man Traps



# References

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- ▶ <http://www.securityguardpedia.com/wp-content/uploads/2015/02/Security-Guard-East-Region.jpg>
- ▶ <http://kudos-security.com/wp-content/uploads/2015/06/TAILGATING.png>
- ▶ [http://cms.dsc.com/media/products/lthumbs/i\\_T-REX.jpg](http://cms.dsc.com/media/products/lthumbs/i_T-REX.jpg)
- ▶ <https://www.youtube.com/watch?v=4YYvBLAF4T8>
- ▶ <https://upload.wikimedia.org/wikipedia/commons/8/8c/Bank-Security-Guard-Sleeping-Cropped.jpeg>
- ▶ [http://blogs-images.forbes.com/patrickmoorhead/files/2015/08/Windows\\_10\\_Hero.png](http://blogs-images.forbes.com/patrickmoorhead/files/2015/08/Windows_10_Hero.png)
- ▶ [https://upload.wikimedia.org/wikipedia/commons/5/54/WaterMill\\_Window\\_LymeRegis.jpg](https://upload.wikimedia.org/wikipedia/commons/5/54/WaterMill_Window_LymeRegis.jpg)
- ▶ <http://www.nationwidestructures.com/barrier/>

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## ↳ References

References

- ▶ <http://www.securityguardpedia.com/wp-content/uploads/2015/02/Security-Guard-East-Region.jpg>
- ▶ <http://kudos-security.com/wp-content/uploads/2015/06/TAILGATING.png>
- ▶ [http://cms.dsc.com/media/products/lthumbs/i\\_T-REX.jpg](http://cms.dsc.com/media/products/lthumbs/i_T-REX.jpg)
- ▶ <https://www.youtube.com/watch?v=4YYvBLAF4T8>
- ▶ <https://upload.wikimedia.org/wikipedia/commons/8/8c/Bank-Security-Guard-Sleeping-Cropped.jpeg>
- ▶ [http://blogs-images.forbes.com/patrickmoorhead/files/2015/08/Windows\\_10\\_Hero.png](http://blogs-images.forbes.com/patrickmoorhead/files/2015/08/Windows_10_Hero.png)
- ▶ [https://upload.wikimedia.org/wikipedia/commons/5/54/WaterMill\\_Window\\_LymeRegis.jpg](https://upload.wikimedia.org/wikipedia/commons/5/54/WaterMill_Window_LymeRegis.jpg)
- ▶ <http://www.nationwidestructures.com/barrier/>