



Impact of Mobile Gaming

Division of Technology





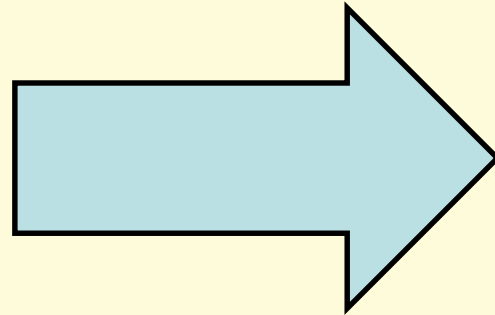
Objectives

- Types of Mobile Gaming Technology
- Basics of How Each Operates
- Considerations
 - Operational
 - Security
 - Regulatory
- Alternate Technical Standards
- Auditing and Regulatory Tips and Practices



Use of Technological Aids

547.1



Permits the use of Technologic Aids with the play of Class II Games



Casino Owned Tablets



- Casino Owned Device
- Safer Connection to Network
- Impractical



Casino & Vendor Applications

- Casino Branded Application
- Promotional Marketing Apps
- Social Media Based Gaming





Online Gaming

- Overseas
- Device as a user interface
- Uncommon In US
- Regulatory Hurdles
- Due Diligence





Sports Betting and Event Betting

Sports Betting



Mobile



Mainstream



Fantasy

Resources:
25 CFR § 502.4(c)



eSports



Non-sports



**In-play bets
Parlay bets**

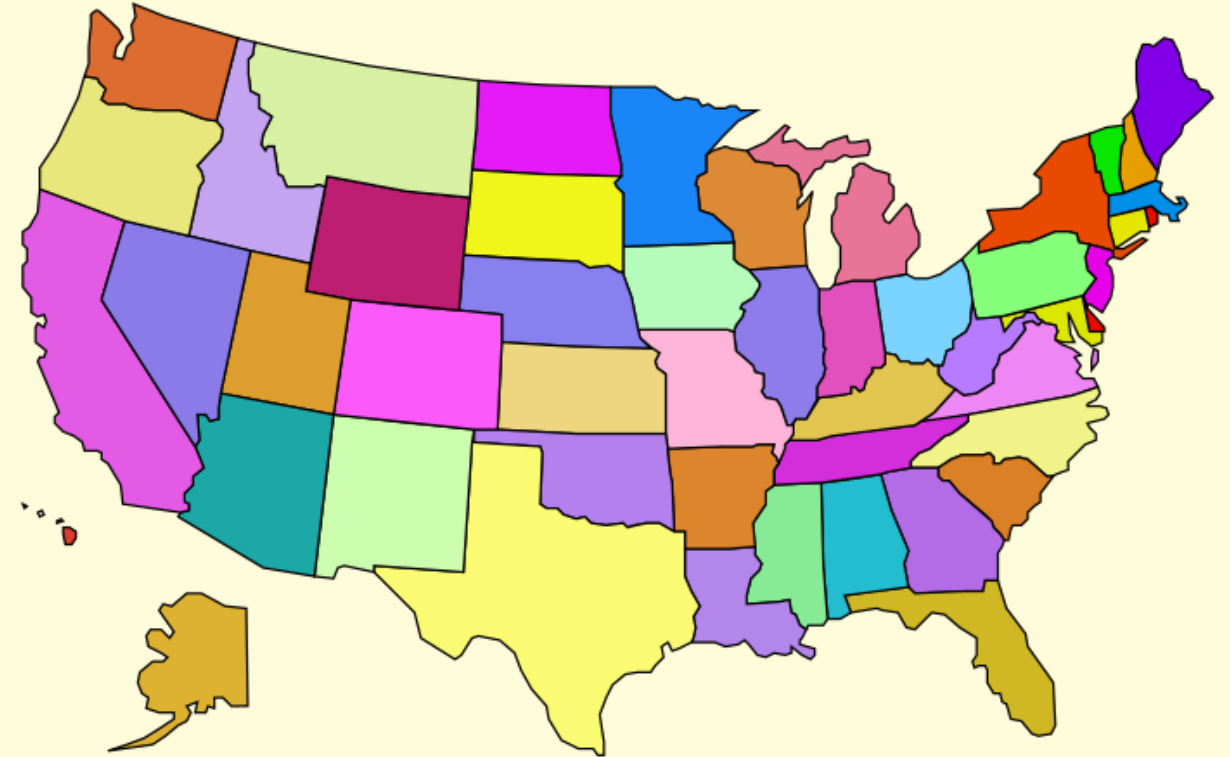


Geofencing

What is it?

Types:

- Wi-Fi within a property
- GPS within a boundary
- Casino vs. BYOD



Resources:
547.15(b), 543.20(e)
GLI-33
NIST800-124r1



Geofencing

Issues:

- Inexperienced Developers
- Link to phone PII
- Link to casino networks
(SQL injection, MitM attacks)
- IP / GPS spoofing (VPNs, Pokémon)





Gaming with Cellular Phones



Considerations:

- Proper Configuration
- Jurisdictional Approval
- Connection to CMS
- 543.20(h) Remote access
- Variances
- Expiration of Bingo Cards
- New TICS/SICS?

- Few Vendors
- Class II vs Class III
- Technological & Regulatory Hurdles

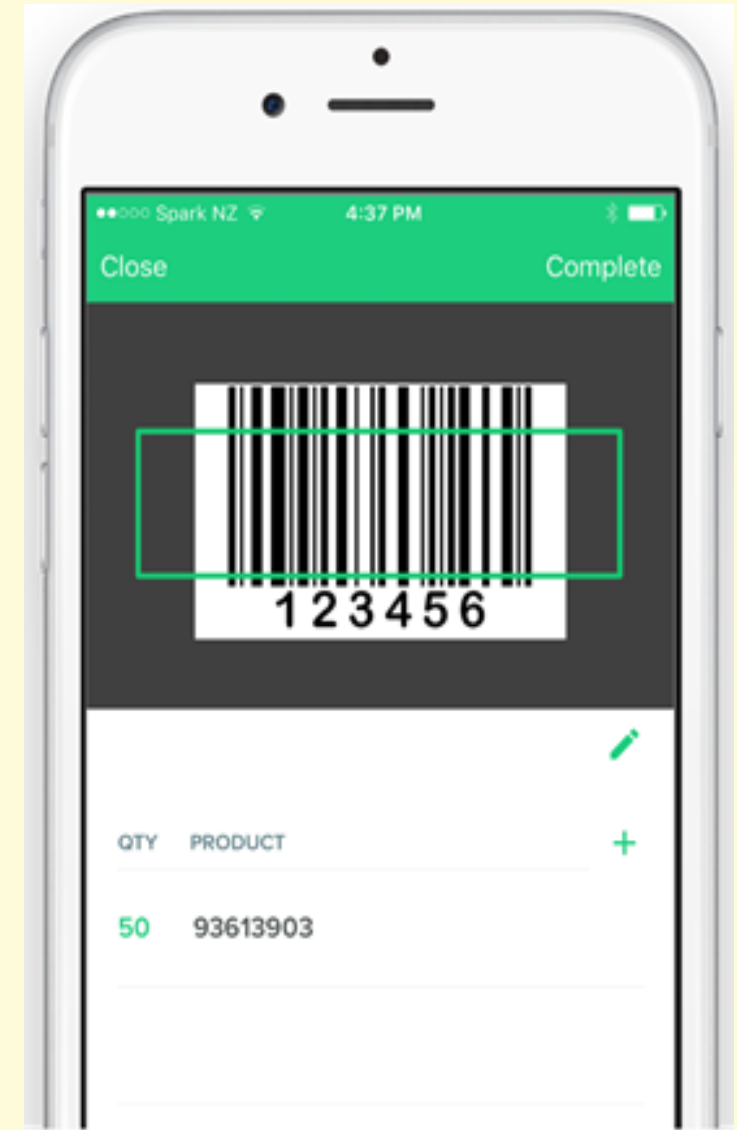


Mobile Vouchers

Considerations:

- New vendors
- Add credits to account
- Scan voucher to account
- Buy chips

Resources:
547.15(b)
GLI-33
NIST800-124r1





Mobile Vouchers (Continued)

Considerations:

- Stand Alone vs Integrated with Casino App
- Connection to CMS
- 543.20(h) Remote Access
- Cash Only Accounts vs Identity Verification
- Possible ACH Deposits?
- Money Laundering Controls?
- Training Surveillance



Alternative Technical Standards



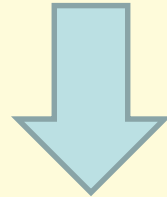
- Why?
- Outside of scope of original 547
- ie. 547.4(b) “Prototype”
- ie. 547.16(b) Disclaimers



Alternative Technical Standards

547.2 -

“Not limited to terminals, player stations, handhelds, fixed units, etc.”

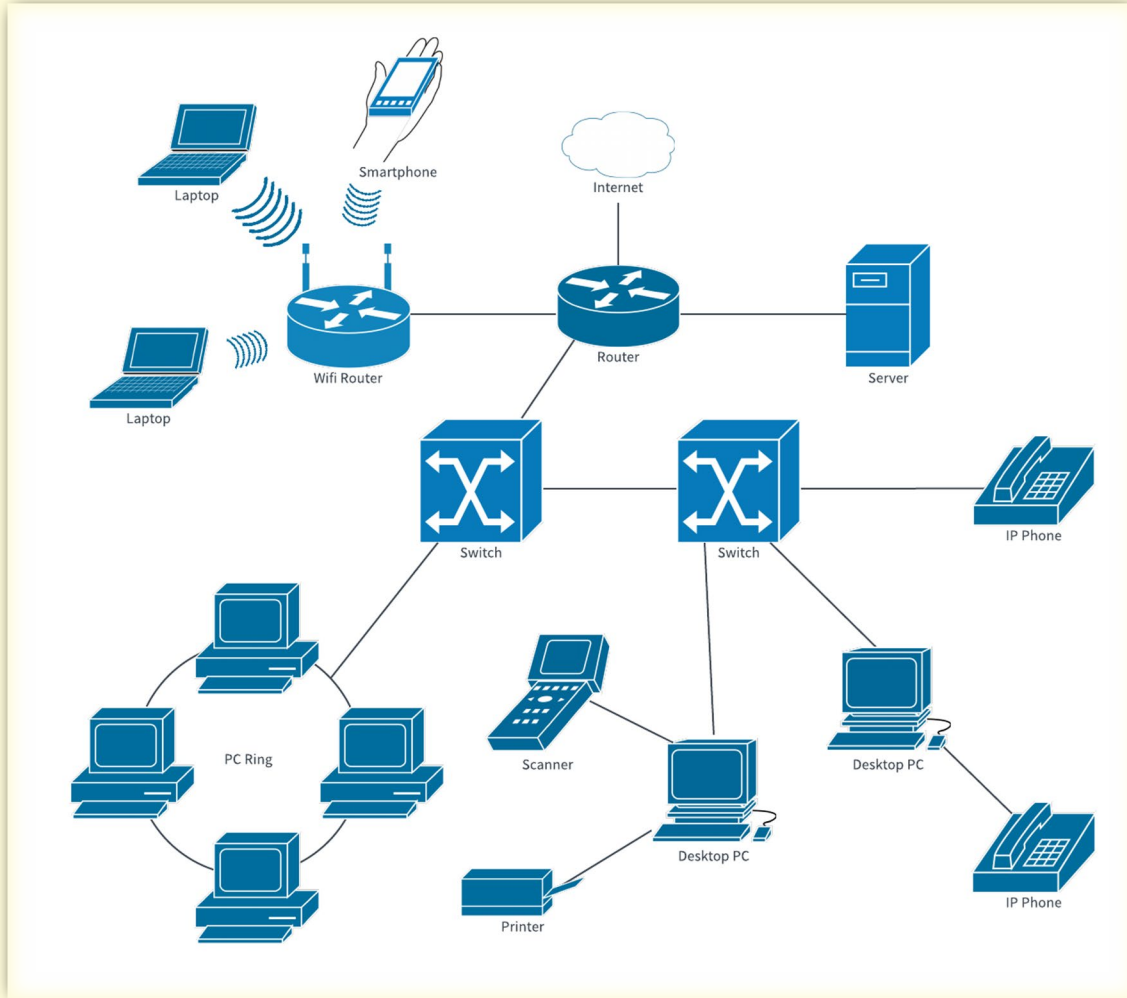


Alternative Standard -

“Not limited to terminals, player stations, handhelds **such as Class II mobile devices, fixed units, etc.”**



Tips for Auditing



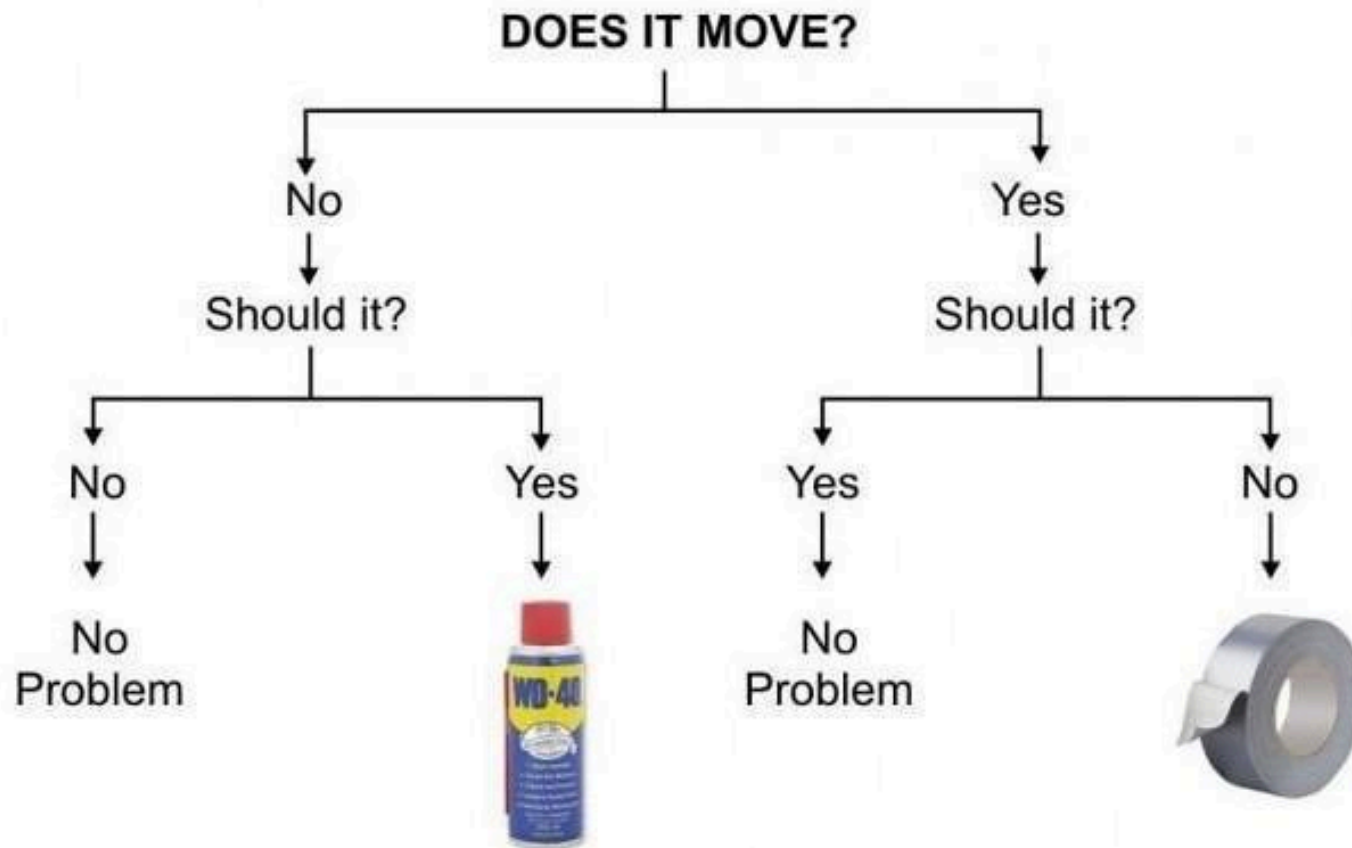
- What does this interact with?

Resources:
543.20 Physical & Logical
NIST800-171r1
ISO/IEC 27001



Tips for Auditing (Continued)

Engineering Flowchart



- How does this work?
- Is it applicable to audit or regulation?

Resources:
NIGC
Vendor
ITL



Tips for Auditing (Continued)

- Who has access?
- What kind of access?

Permissions									
Basis	Allow			Conditional			Disallow		
	Master	Reference	Thumb	Master	Reference	Thumb	Master	Reference	Thumb
<i>Copyright</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>License</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Statute</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Policy</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Donor</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

All / None

Remember: 543.20(f) User Controls

- RBAC – Role Based Access Control
- INCITS 359-2012



Tips for Auditing (Continued)



- How is that access logged?
- How is that access reviewed?

Resources:

543.20(f) User Controls

NIST800-53r4

ISO 27001 - A.9



Questions

Jeran Cox

IT Auditor

jeran_cox@nigc.gov

Michael Curry

IT Auditor

michael_curry@nigc.gov

Sean Mason

IT Auditor

sean_mason@nigc.gov

Tim Cotton

IT Audit Manager

timothee_cotton@nigc.gov