- Ensuring personal data protection while securing cyber space -

- Challenges and perspectives for the South East European Countries -

Sarajevo, 29-30 October 2014.

Cyber Warfare using Mobile Devices as Weapon - Sasa Mrdovic

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Agenda

- BYOD
- Mobile device – security issues
- Perimeter defense
- Mobile devices – weapon for deperimeterization
- Attack scenario – practical example
- Conclusion and open issues

BYOD

- Bring Your Own Device
- Popular
- Convenient
- Inevitable
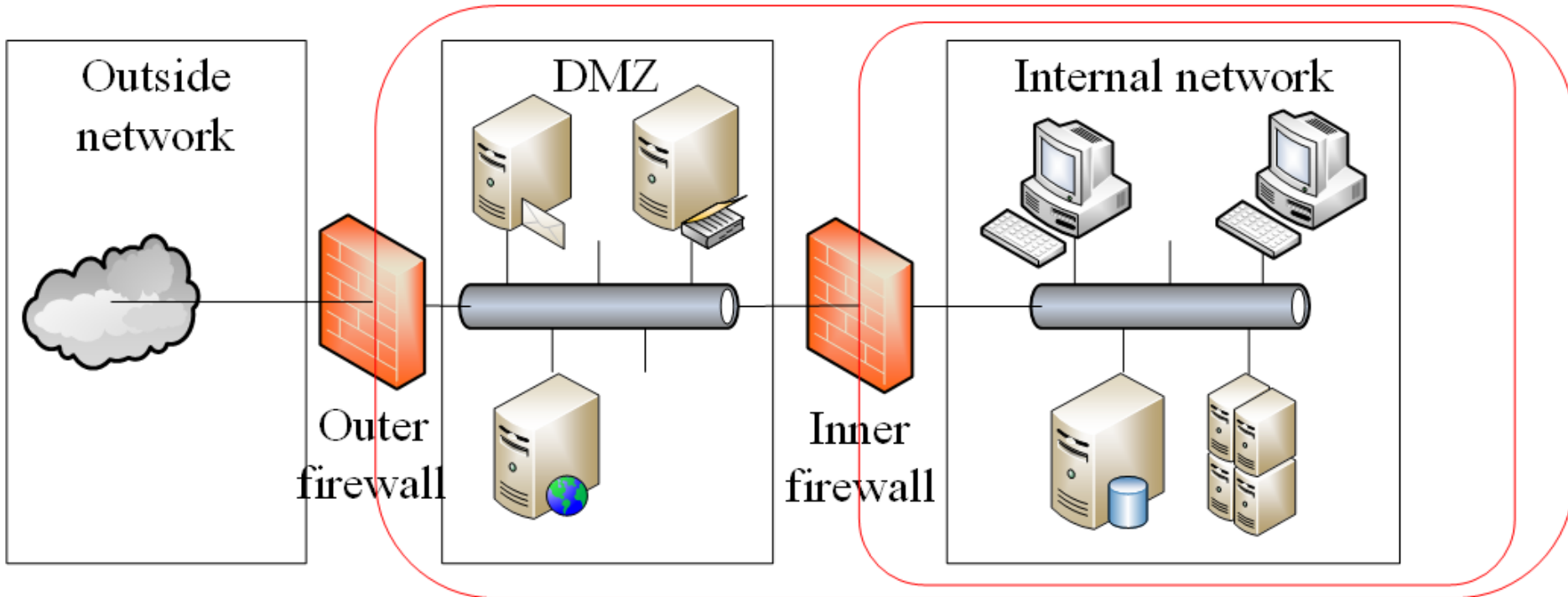- Dangerous (possibly)

Mobile device – security issues

- Many
  - Data on device, surveillance, access to connected accounts, privacy, …

- Presentation focus
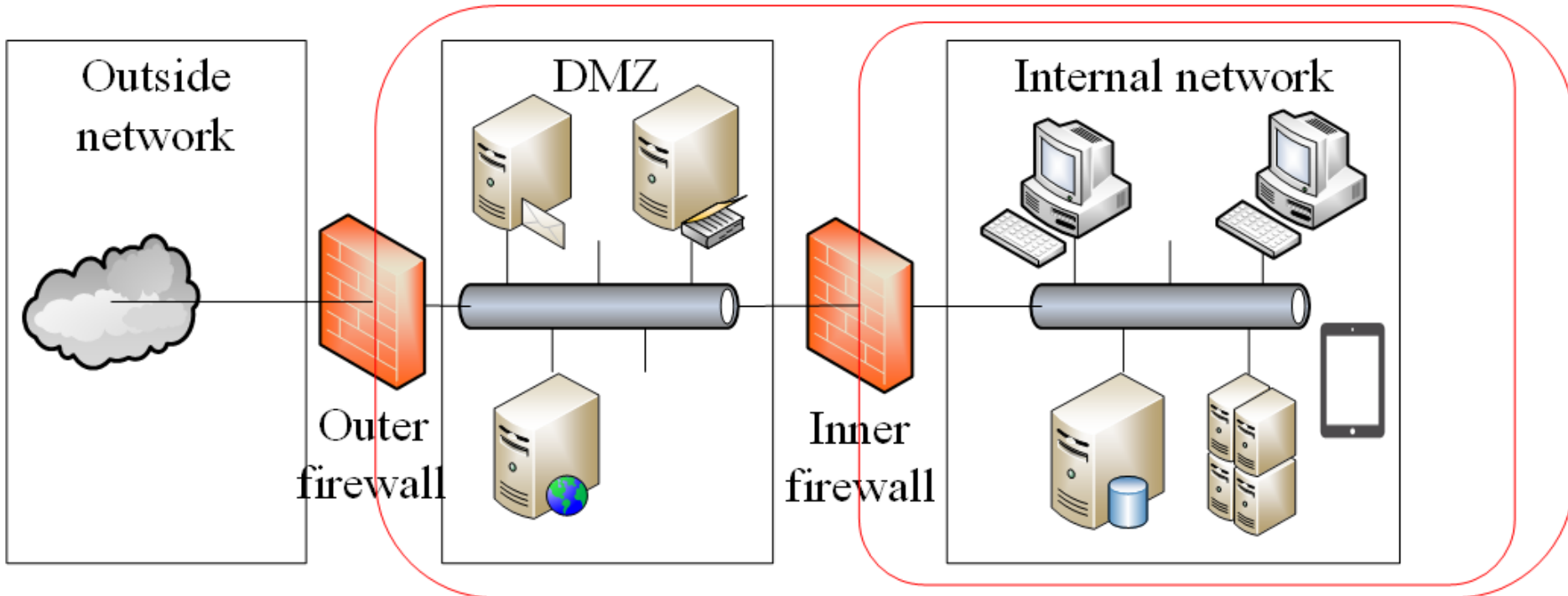 - Mobile device as a stepping stone to protected network

Medieval castle

Gates
(control points)

Level 1
(outter wall)

Level 2
(inner wall)

Market area
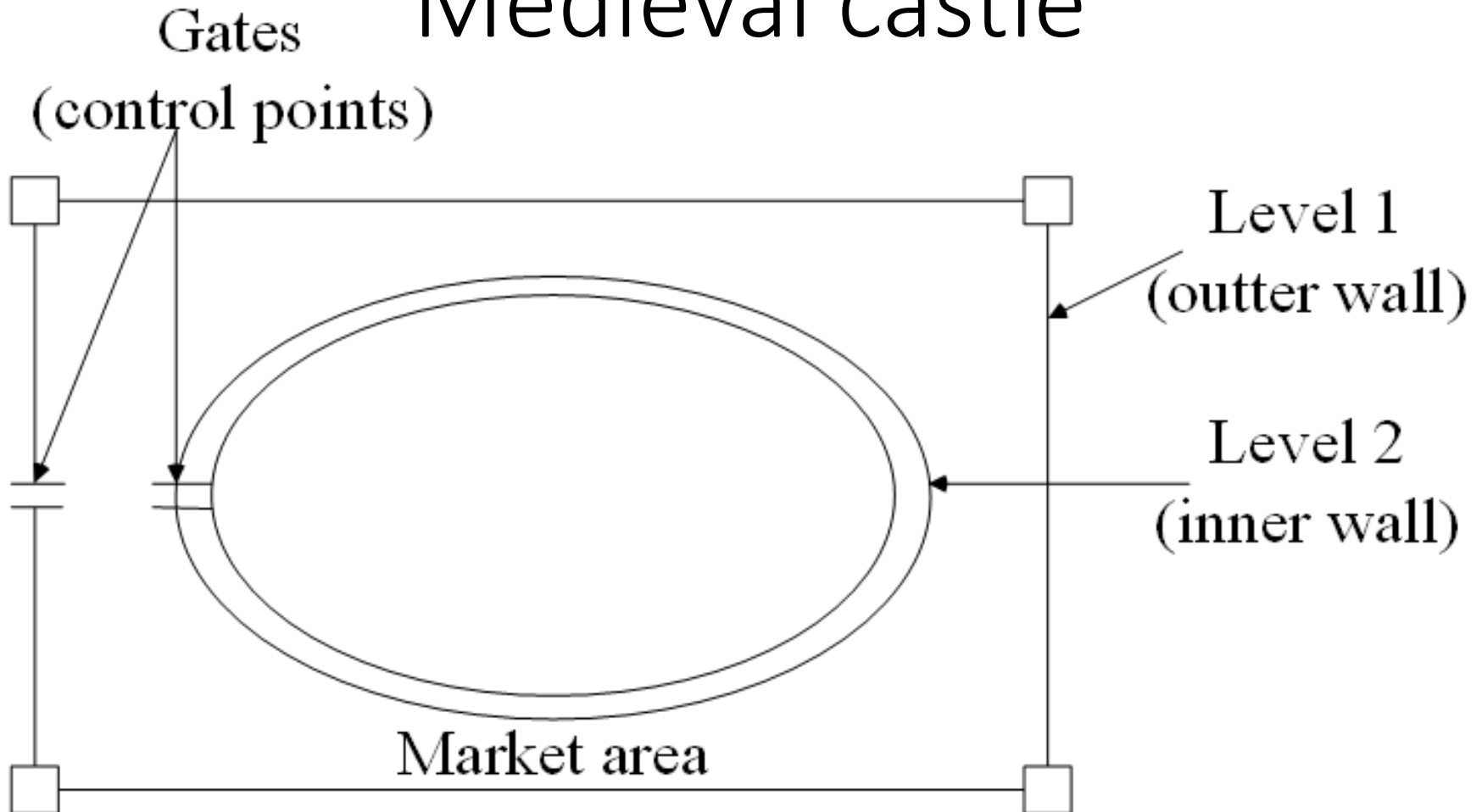
- Nothing comes in/out
  - Except through the gates
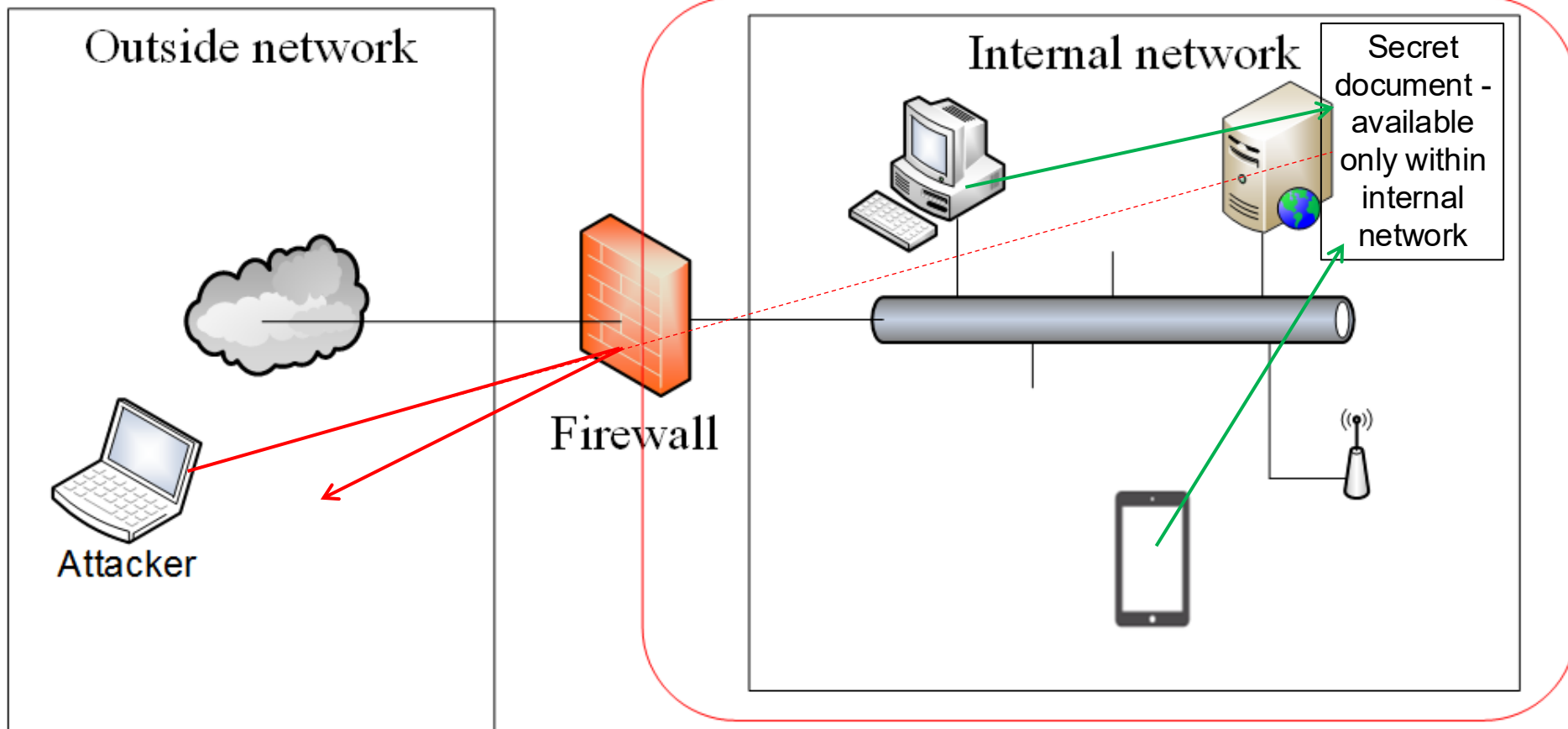
Network perimeter

- Nothing comes in/out
  - Except through the firewalls
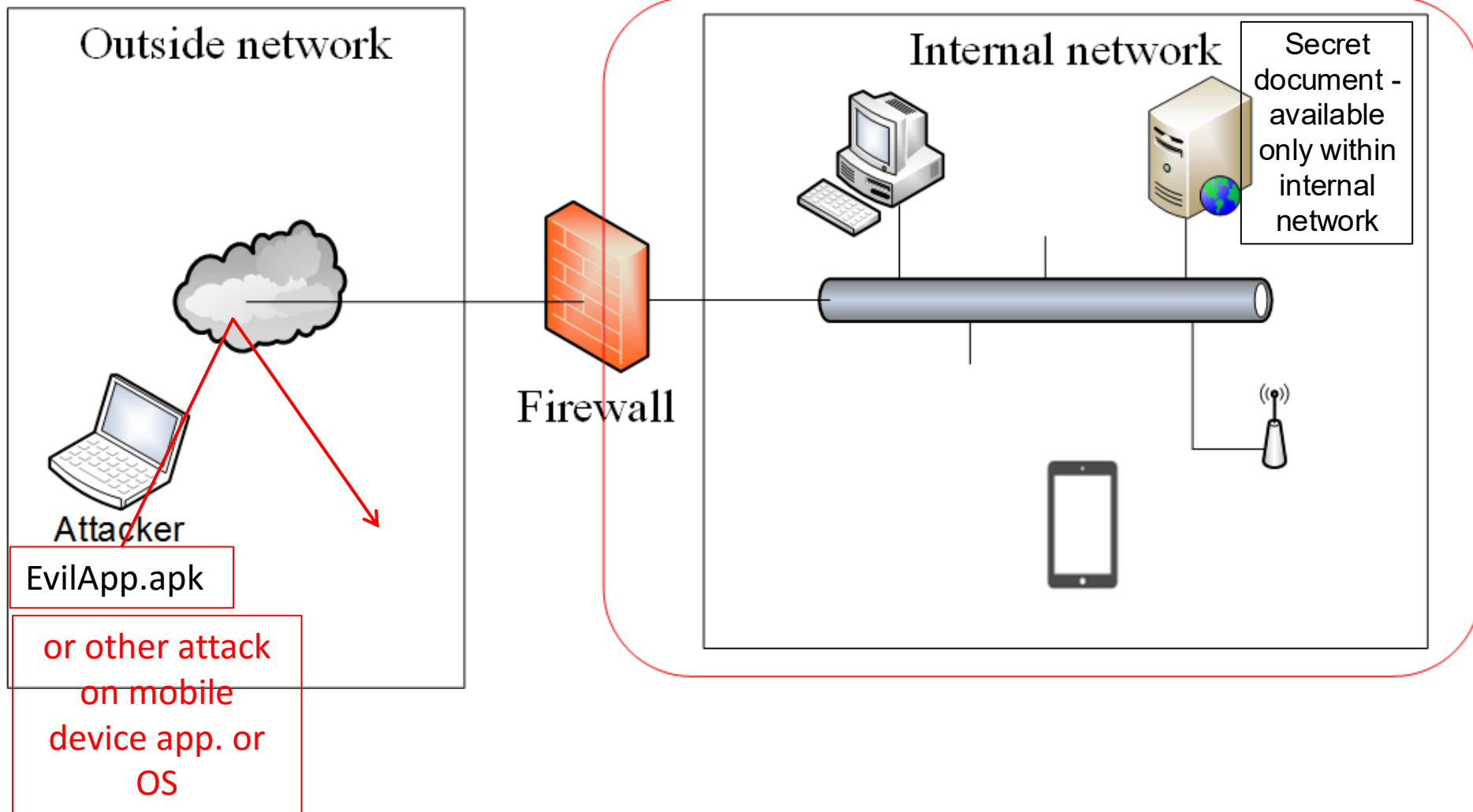
Mobile devices can "climb the walls"

- They come in/out as they (users) please
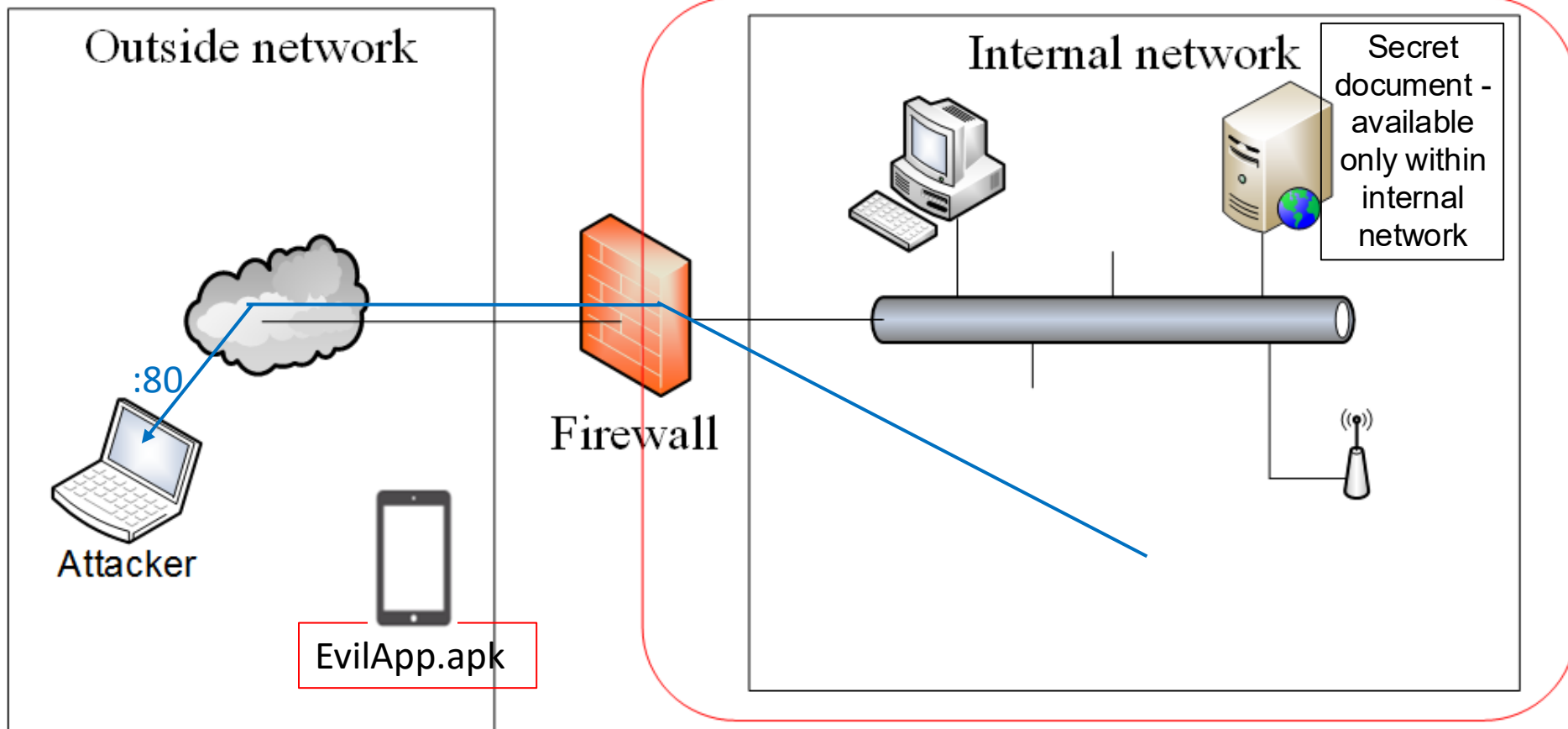 - Completely avoiding the firewalls ("deperimeterization")
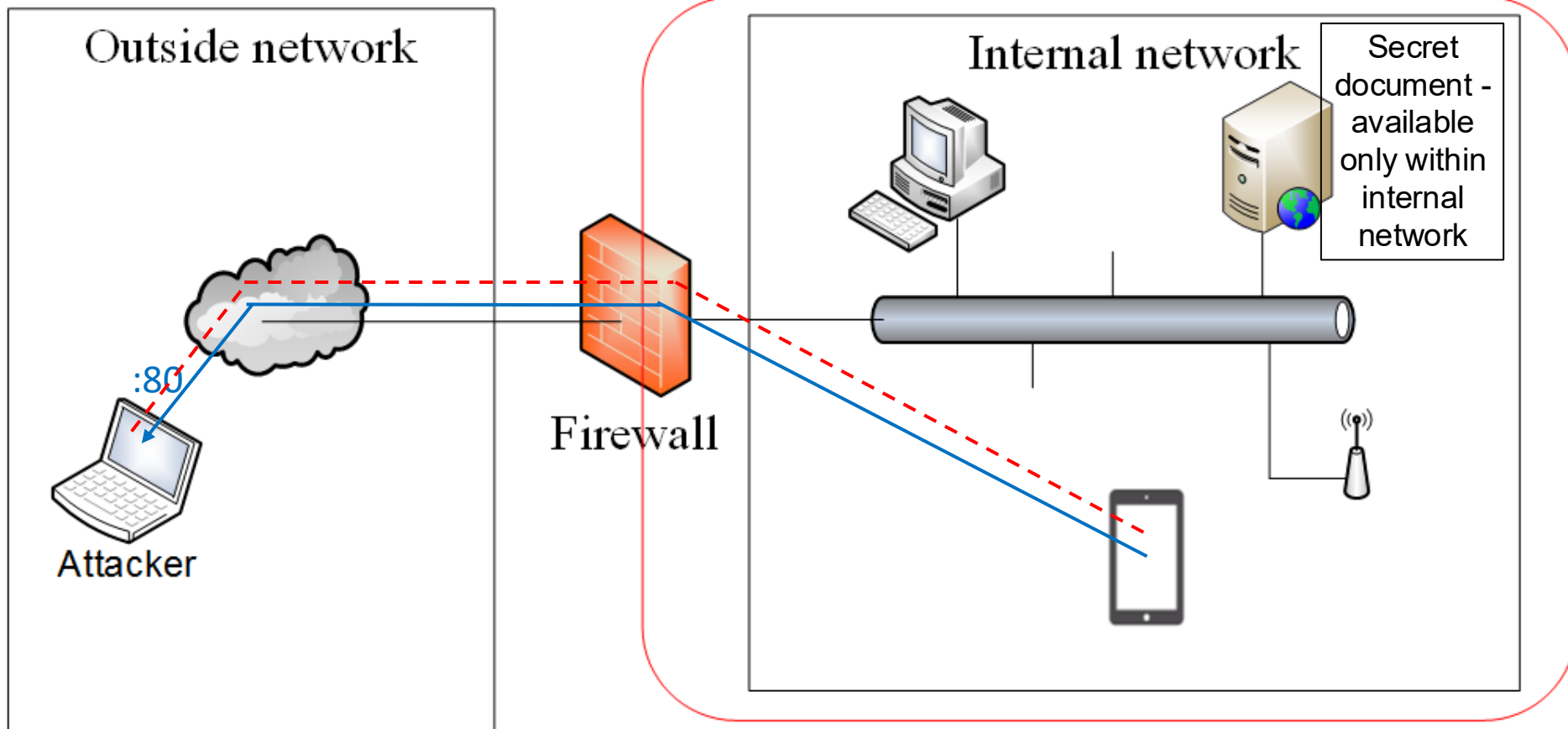
Attack scenario

Attack scenario (2)

Outside network
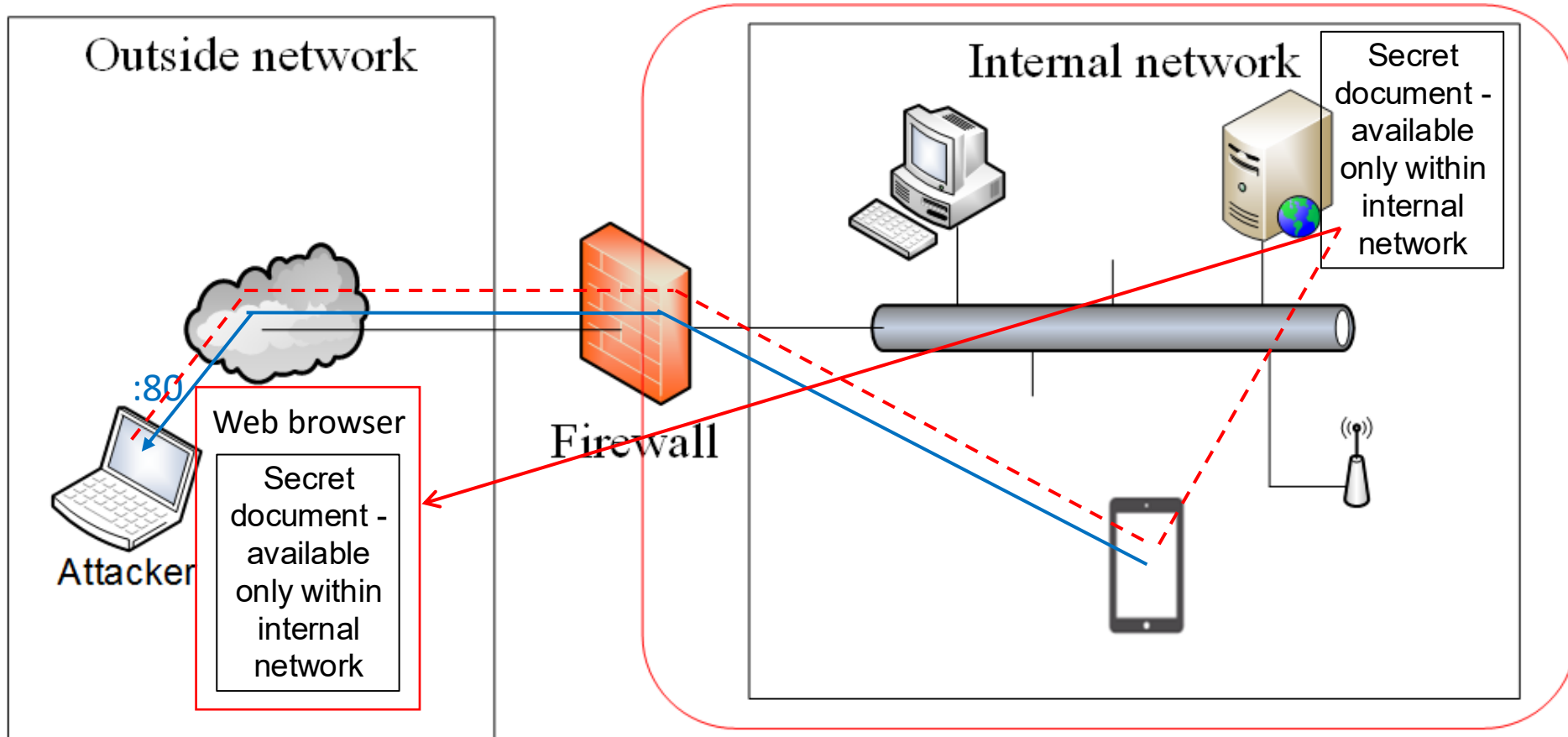
Attacker

EvilApp.apk

or other attack on mobile device app. or OS

Firewall

Internal network

Secret document - available only within internal network

Attack scenario (3)

- EvilApp connects back to attacker on HTTP port (80)
  - Permitted by firewall ("web surfing")

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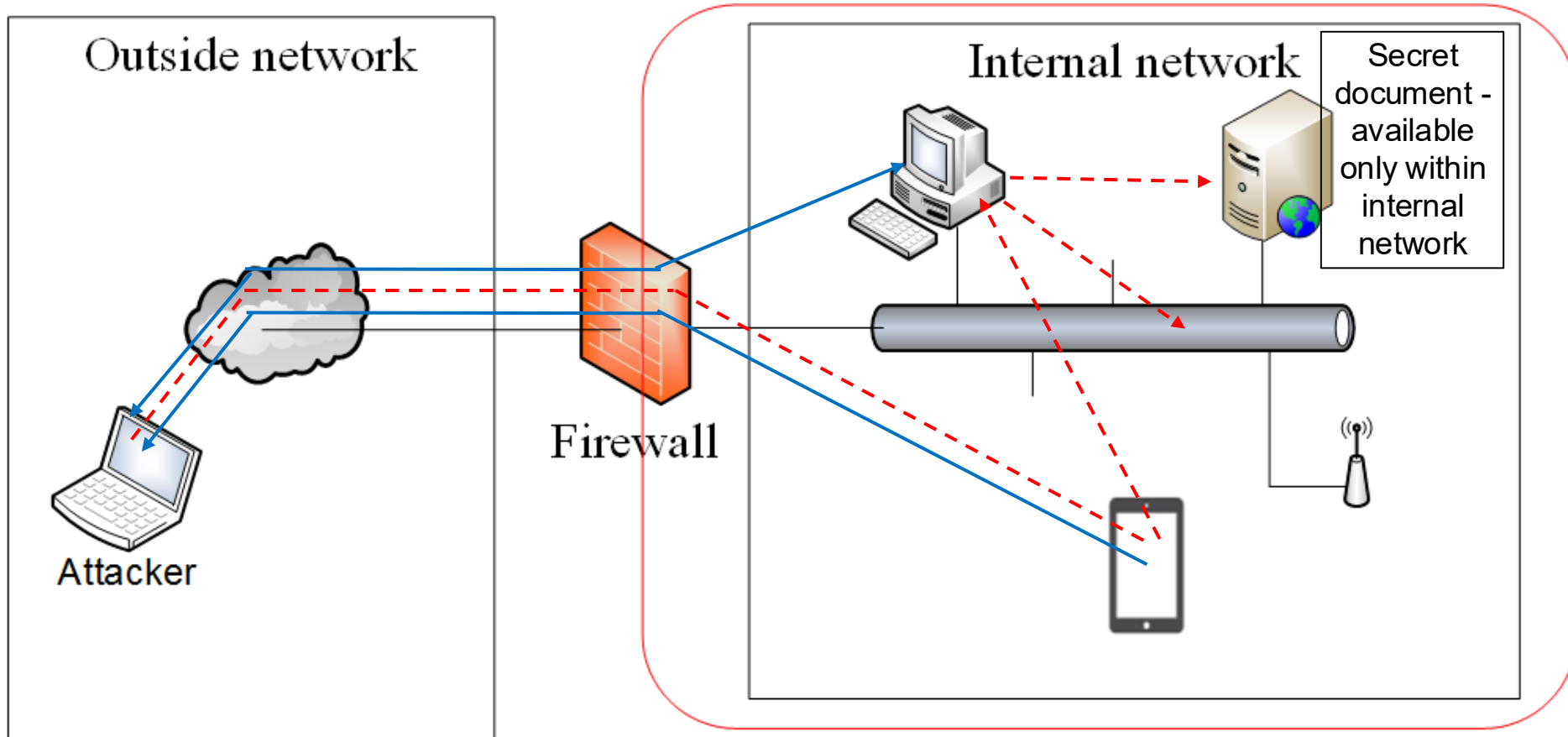
Attack scenario (4)

- Through this connection attacker has full control of mobile device

Attack scenario (5)

- including using it as a tunnel to internal network

Attack scenario (6)

- or using it to attack other PC on internal network
  - taking it completely over (no need for mob. dev.)

Conclusion

- Mobile devices are useful
- They are here to stay
- They could be used as a weapon
  - Against user and his organization
- Can we protect ourselves
  - Sure
  - But it takes some effort