SCCo ARES/RACES Data Network Subscriber Network Examples

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Overview

- The following network diagrams provide ideas for how to connect to the SCCo ARES/RACES data network

- Several examples are shown (large, medium, small)

- The diagrams are highly stylized
  - They show general connectivity without clutter
  - Subscribers may choose to use redundant network components, making the actual connectivity much more complicated
  - For subscribers that are co-located with one of the network hub sites, an Ethernet connection is used instead of the radio connection

- The examples are not exhaustive
  - There are an infinite number of possible configurations; these are just a few

Icons

The diagrams use the following icons
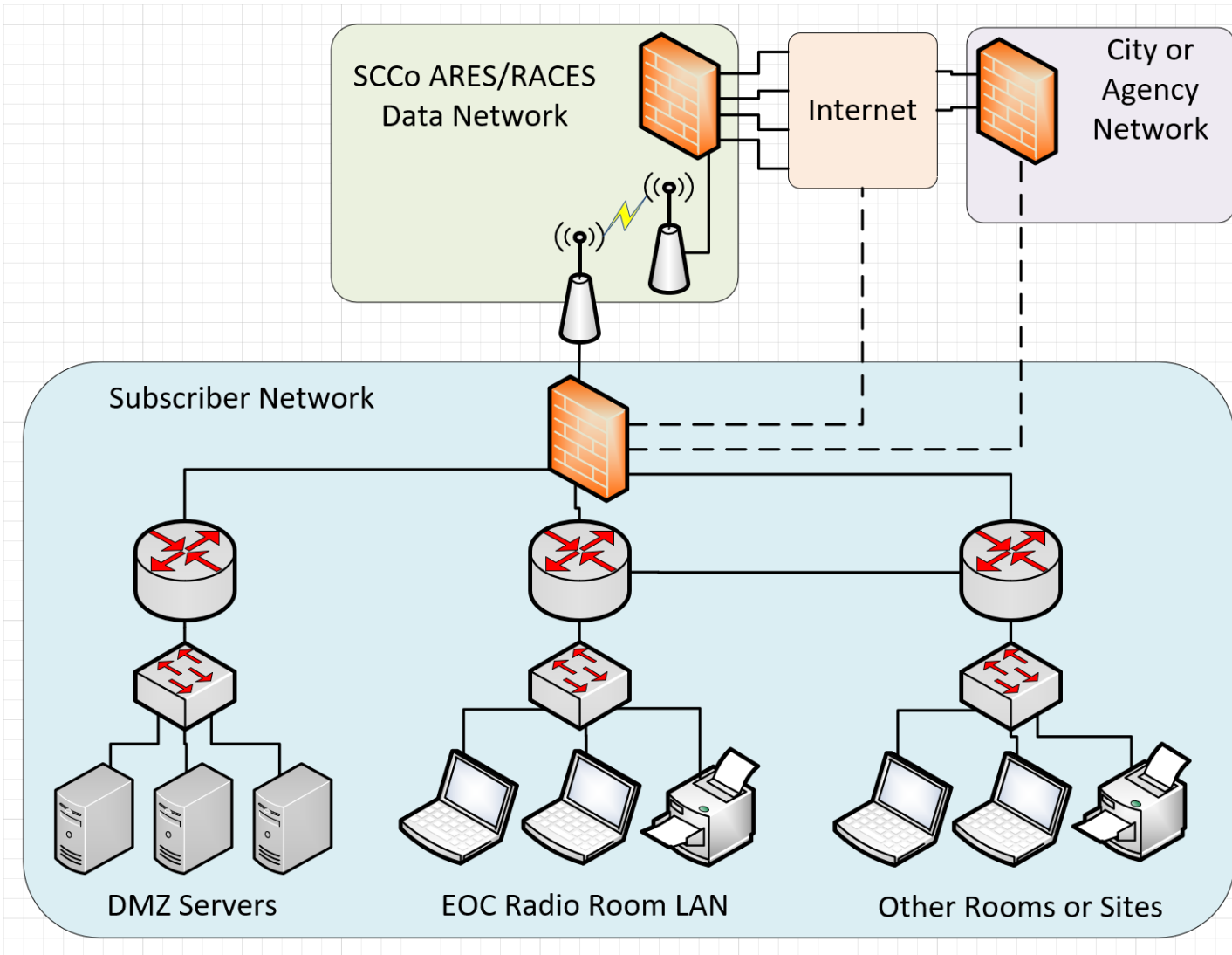
Firewall

Server

Radio

PC

Router

Printer

Switch

Large Network

- Existing multi-site network

- Might have its own connection to the local city network

- Might have its own connection to the Internet

- Might have its own servers
  - File, web, VoIP phone, e-mail, DNS, …

- Likely (or should be) using an Enterprise-class firewall
  - Advanced layer 4-7 packet inspection
 - Intrusion prevention measures, anti-X (SPAM, virus, …) capabilities
  - Higher performance

Large Network

Medium Network

- Existing single site or multi-sight network

- Might not have connections to other networks

- Might have a local server

- Likely using a small/medium business firewall
  - More advanced scanning than consumer-grade
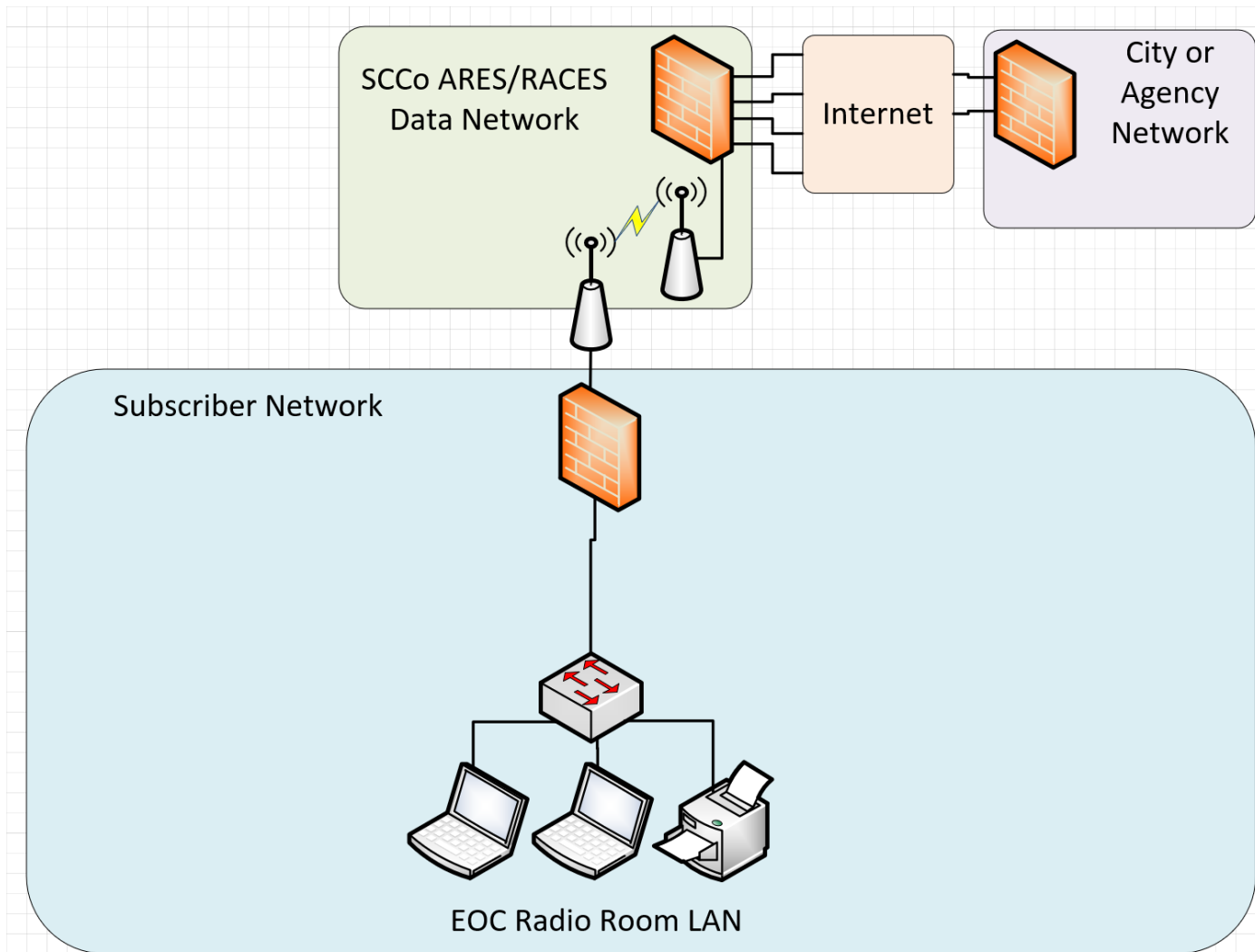 - Not as sophisticated as Enterprise-grade
  - Medium performance

Medium Network
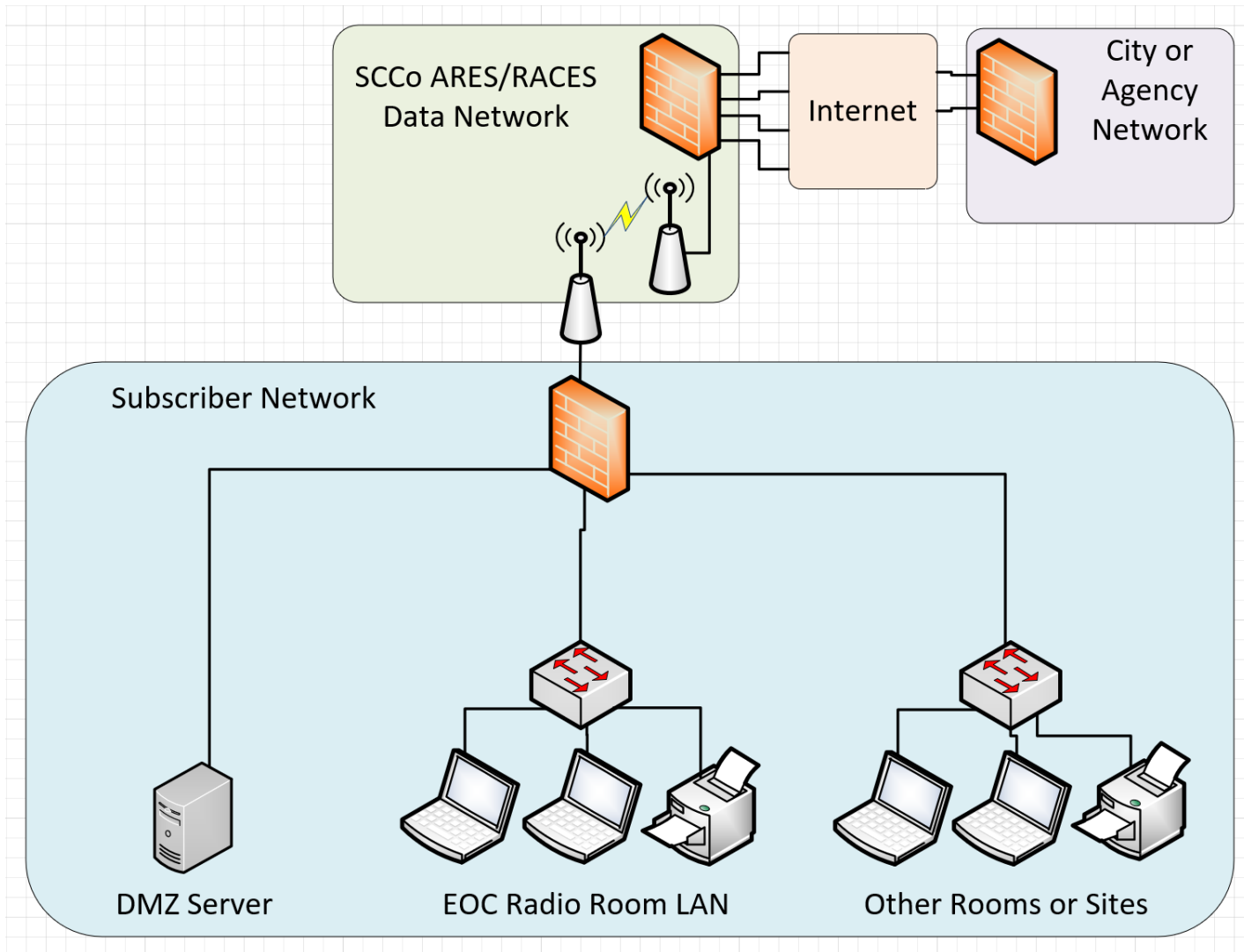
Small Network

- Single site radio room with a few devices

- Probably no connections to other networks

- Probably no local servers

- Likely using a consumer-grade firewall

Small Network

Unsecure LAN (Not Recommended)

- Each subscriber is responsible for their own network security

- We strongly advise AGAINST connecting PCs and other equipment to the network without a firewall

- Doing so puts the site at risk from malicious actors or software that could exist at other subscriber sites
  - For ease of deploying services, the SCCo ARES/RACES Data Network does not prohibit one subscriber from connecting to services offered by another subscriber

- The subscriber is also subject to whatever may get past the SCCo network firewalls
  - The SCCo network firewalls are configured to protect the core network
  - Operator error and software bugs happen

Unsecure LAN (Not Recommended)