### Technology

A Look Behind The Curtain

Presented By:

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- Superintendents
- Business Administrator
- Director of Technology
- Technology Support Staff
- Director of xxx
- Someone else

#### Who Are You?

- John Piznar
  - Manager of Information Systems
  - 16+ years in the South Brunswick School District
    - Started as 3<sup>rd</sup> grade teacher
    - Converted into Techie

#### Who Are We?

- Joseph M. Lee
  - Co-Director of Technology for the South Brunswick School District
  - 19+ Years in the Information Technology Field
    - Been involved in all aspects of information technology from desktop to server to networking
    - Worked in Education for the past 7 years and previously for fortune 500 companies

#### Who Are We?

#### Change Is Inevitable



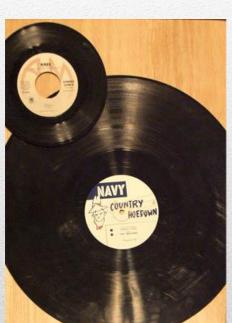


























### EWT GEPA NJASK8 Tera Nova NJASK HSPT HSPT-9 HSPT-11 HSPA

# PARCC

- Change?
- Devices?
- Infrastructure?
- Wireless?
- PARCC?
- All Of The Above?

# What Brings Us Here Today?

### YES!

- Change Inevitable
- Devices So many options
- Infrastructure The behind the scenes foundation
  - Wireless Extension of the foundation
- PARCC Current driver
- All Of The Above Working together to move forward

# What Brings Us Here Today?

- Discussion of some of the things behind the scenes, what is really going on.
  - The infrastructure
- Discussion of South Brunswick
  - Things we have done and are doing
- Your role as Educational Leaders
  - Tips for Overcoming Obstacles

#### **Objectives**

• Internet use – how do you get to a website like google.com or whatever one we want to use?

# Something you might relate to

• Information travels from the computer across the wire or wireless to a switch to servers to determine whether it is on the network or not by looking for DNS name resolution. If not local, it travels back through switches to a router to a firewall and out to other routers outside of your local area. The routers pass information throughout the world until it locates where google.com then google.com sends information back in reverse.

## What is really going on (Nutshell)

• All this is taking place within a few moments. Without a proper infrastructure, this whole process can break down.

#### **Nutshell Continues**

- The Definition on dictionary.com for in fra struc ture is:
  - 1. the basic, underlying framework or features of a system or organization
  - 2. the fundamental facilities and systems serving a country, city, or area, as transportation and communication systems, power plants, and schools.

#### Infrastructure Definition

- Ever use the internet?
- Ever use a cell phone?
- Ever listen to music on the radio?
- Ever watch TV?
- Ever go shopping in a store?
- Ever turn on a light?

# Infrastructure – Why do you care?

- Infrastructure as it Pertains to Technology
  - CAT6 Cables
  - Switches
  - Routers
  - Servers
  - Firewalls
  - IP Addresses
  - DNS Resolutions
  - And many other boring items

# What is the Infrastructure?

- Technology is part of the daily operations
- Just like a roof, infrastructure needs to be checked and maintained
- Imagine your day without technology

#### Items to Remember

#### Welcome to South Brunswick

- District
  - 12 school locations (14 total buildings)
  - 41.04 sq miles
- Total Students = 8605
  - Total Students Testing = 6208
    - Based on our last NJTrax submission

## South Brunswick School District

- What device to use for PARCC
- Infrastructure to support the volume of data traffic
- Testing structure and coordination
- Funding

#### **Challenges Being Faced**

- Conversations need to be had
  - Device choice can/will impact curriculum
  - Device choice can impact infrastructure needs
  - Device choice can impact how to roll out the devices
  - Device choice affects budget

#### Communication

- Look at different devices
  - Ipads
  - Laptops
  - Desktops
  - Virtual Desktops
  - Chromebooks
- How many do we need?
  - Based on PARCC
    - Largest class size divide by 2 + 10% = total for building
    - District total is 1500 needed devices

#### Devices

- Devices selected Chromebooks
  - Cost Effective
    - Ipad \$499 \* 1500 = \$748,500
    - Laptop \$1000 \* 1500 = \$1,500,000
    - Desktop \$850 \* 1500 = \$1,275,000
    - Chromebook \$250 \* 1500 = \$375,000
  - Ease of use
    - Operates similar to a laptop
  - PARCC Compliant
    - App for testing

#### Devices

- Decision impacted district
  - Integration into curriculum
  - Get children using the device
  - Getting staff trained on using Chromebooks

#### Chromebook

- Wireless infrastructure
- Internet connectivity
- WAN connectivity

#### Infrastructure Inventory

- Wireless Infrastructure BEFORE
  - Apple airports as needed
- Wireless Infrastructure AFTER
  - Meraki with full building coverage
    - <a href="http://Dashboard.meraki.com">http://Dashboard.meraki.com</a>

#### What We Did

- Bandwidth
  - Internet Connectivity
    - Upgrade of bandwidth based on device needs and PARCC
  - WAN Connectivity
    - Upgrade of bandwidth based on device needs and PARCC

#### What We Did

- Monitoring
  - BEFORE
    - Baseline to see where you are
  - AFTER
    - Making sure things are sufficient

#### What We Did

- How we plan to deploy our devices for testing
  - Elementary collection process
    - Inserted 4 devices into the classrooms 3-5
    - Additional Chromebook into 2<sup>nd</sup> grade
  - Middle School carts to testing locations
  - High School carts to testing locations

### Testing Structure and Coordination

- Planning, Planning
  - Identify the needs
  - Identify the costs
  - Follow a plan

#### Funding

#### Overcoming Obstacles

- How do you handle the inevitable?
  - Take it head on
  - Embrace it
  - Resist it
  - Run screaming into the night

#### Change Is Inevitable

- PARCC is coming
- Devices are needed
- Internet is needed
- Support structure is needed
- Funding is needed

## TIP 1 - Know What You Know

- Different people have different skills
  - Testing vs. Technology
  - Business Office vs. Technology

## TIP 2 - Know What You Don't Know

- There are things out of your control
  - Power outage
  - Circuit down
  - PARCC servers could be down
  - Weather
  - Zombie Apocalypse

# TIP 3 – You Can Not Control Everything

There are plenty of difficult obstacles in your path.

Don't allow yourself to become one of them.

~Ralph Marston~

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#### Thank You