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**2021 Fall
Technical Forum**
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Operational Transformation

Augmented Reality and Artificial Intelligence Approaches for Inventory Synchronization

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VIRTUAL EXPERIENCE
OCTOBER 11-14

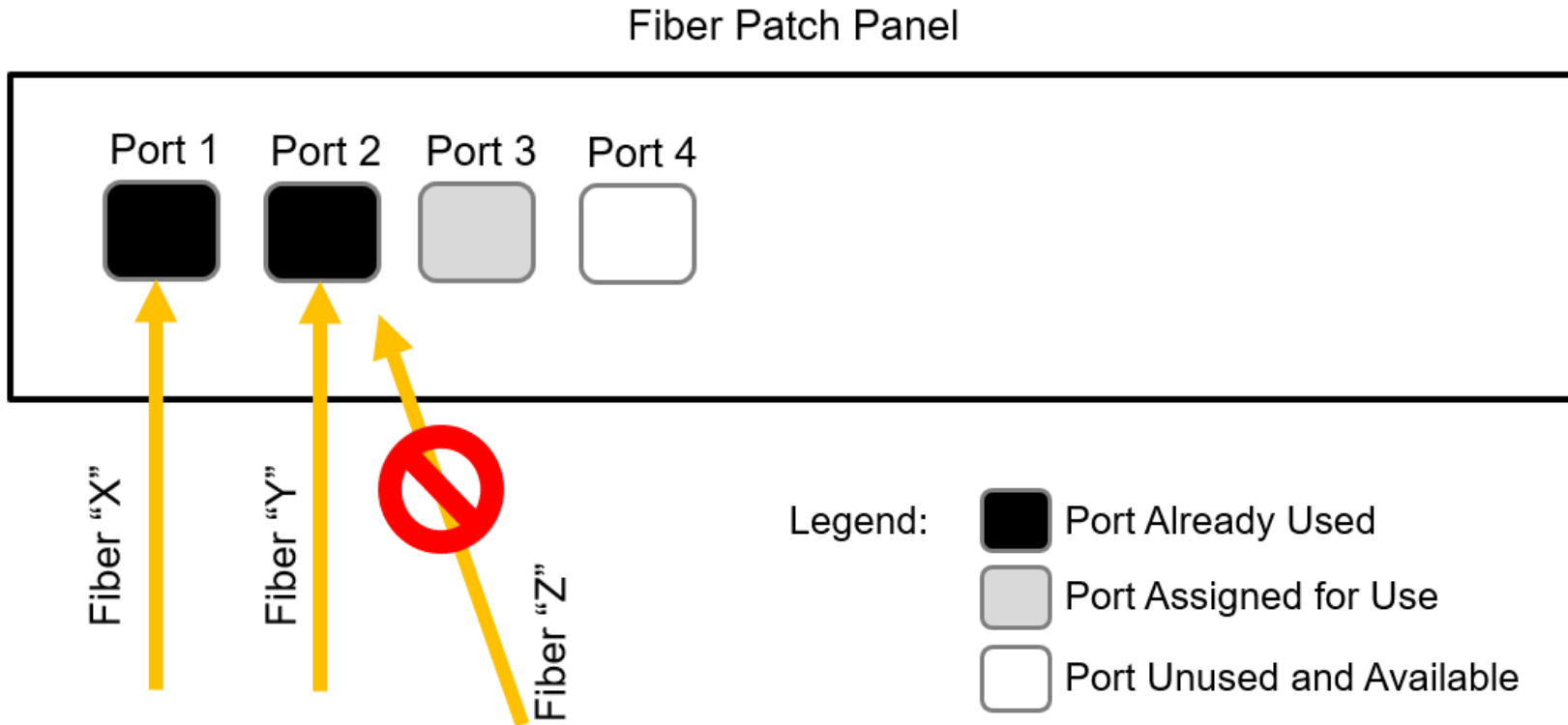
Current State

- Discrepancies between network and inventory continue to accelerate
 - Costing network operators millions in correction and business impacts
- Manual approach to network and Inventory alignment is no longer viable
 - Customer service needs and network evolution are growing in complexity
- Legacy Systems will evolve slowly but new approach needed now
 - New inventory synchronization approach needs to coexist with current processes

Example Operational Flow and Protocol

- Sales Order triggers a Service Request
 - Service request includes non-addressable (Discoverable) resources
- Service is defined end-to-end based on inventory view
 - The “as-stated” inventory view is not aligned with “as-is” network view
- Field work-order is issued to the technician
 - The work-order states the technician to connect fiber to port 2
- Field technician contingency protocol
 - In case a port is already used, select the next available port
 - Document back to the planning team the port used for Inventory update

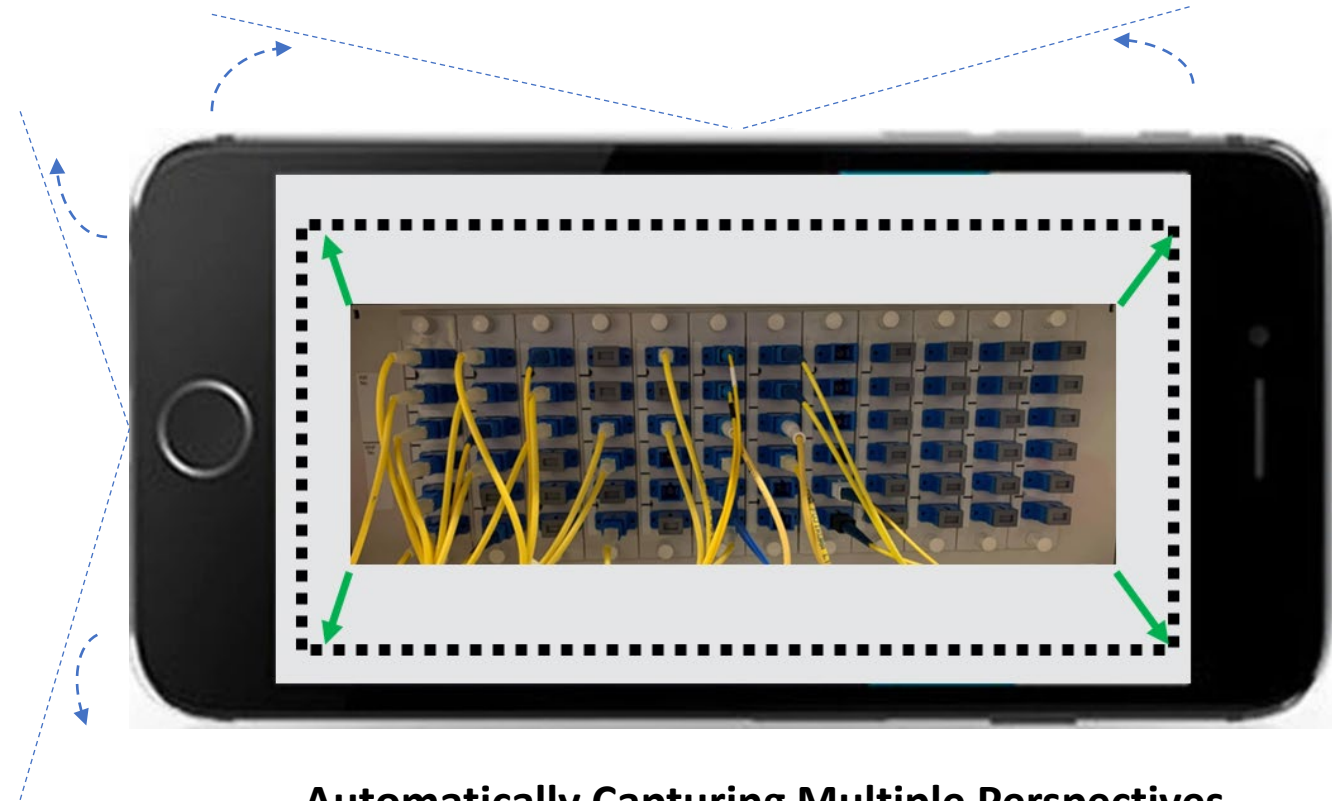
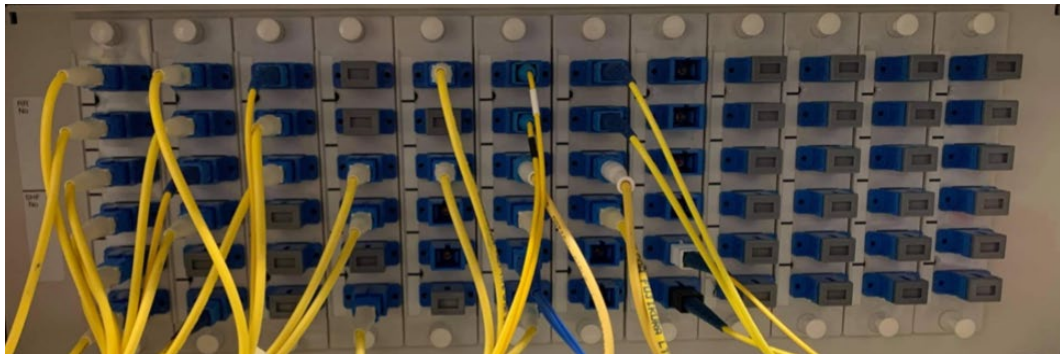
You Can't Automate What You Can't See



- Ports Used but not tracked in Inventory
- Ports Planned but not known in the Field
- Physical Connections Cannot be Removed Without Risk
- Service Fulfillment Task Cannot be Complete as Requested

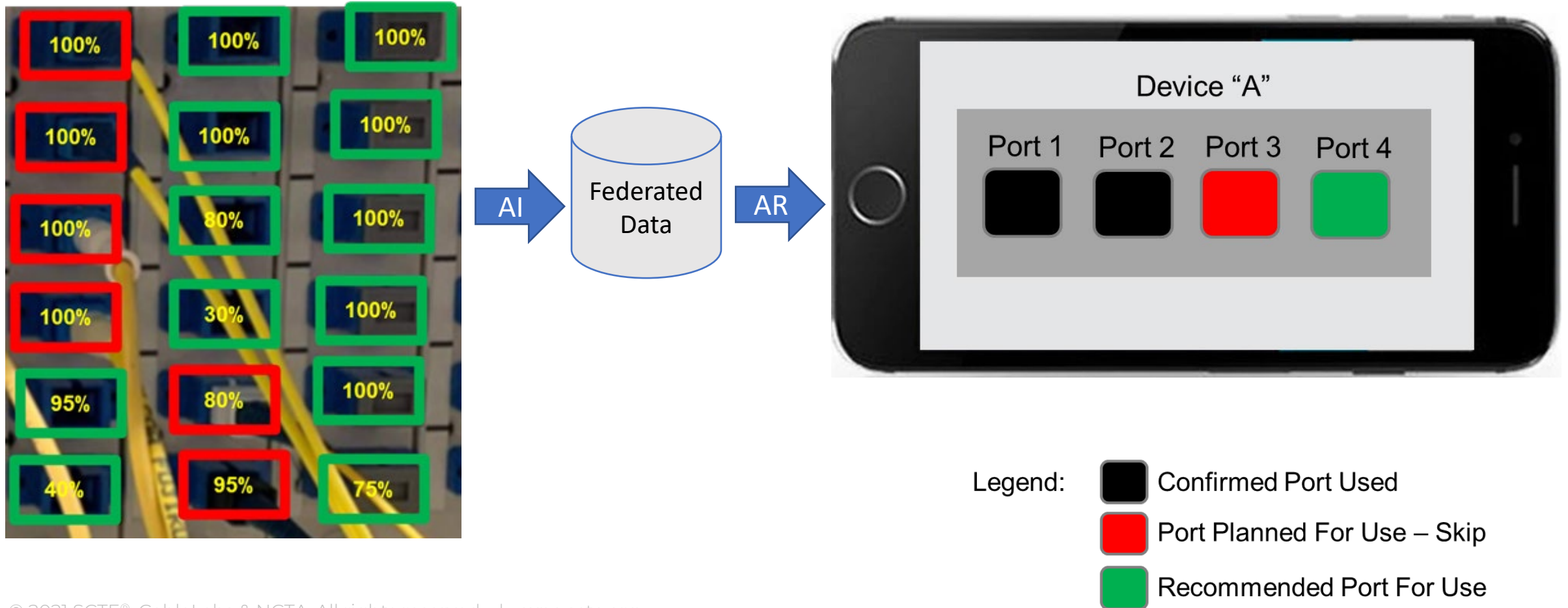
Capturing the "As-Is" State of the Network

Example Resource Element

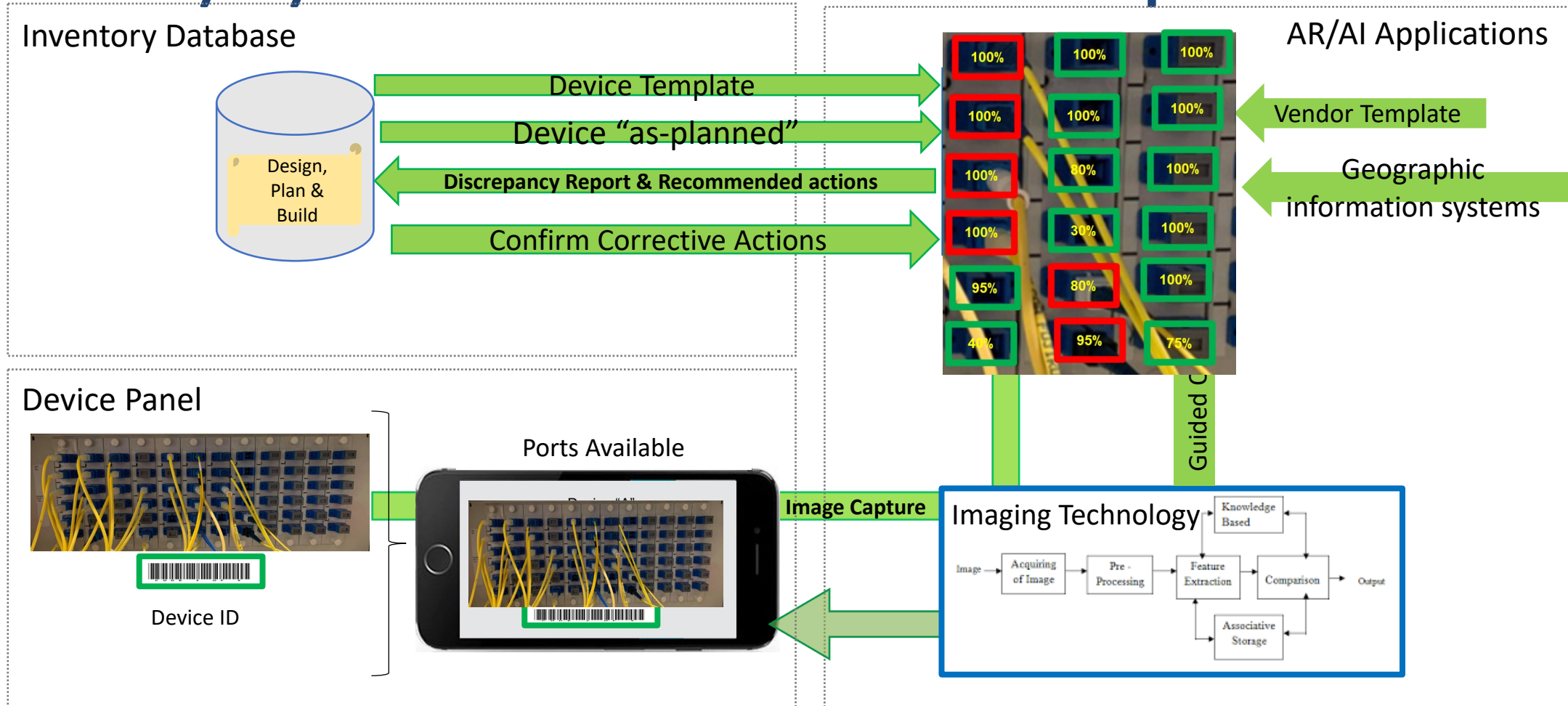


Automatically Capturing Multiple Perspectives

Creating a Digital Device Map



Inventory Synchronization and Guided Operations



AI/AR – Solving Network Inventory Synchronization

- Network operators need help with inventory synchronization
 - The current impact on business is great and growing
- AR and AI technology exists today to tackle the problem of large-scale discrepancies
 - Powerful tools to stop and reverse misalignment between network and Inventory
- The proposed approach can co-exist with current systems and tasks
 - Leverages existing tools, new technologies and augments current processes



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Thank You!

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