

TIA-606-C

THE SURPRISING BENEFITS

OF FOLLOWING THE LATEST LABELING STANDARDS

Everything you need to know about complying
with the latest **TIA-606-C** labeling standard

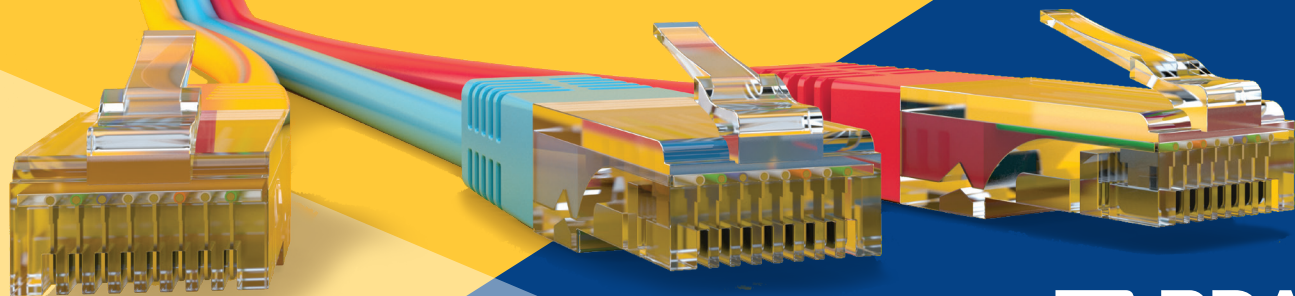


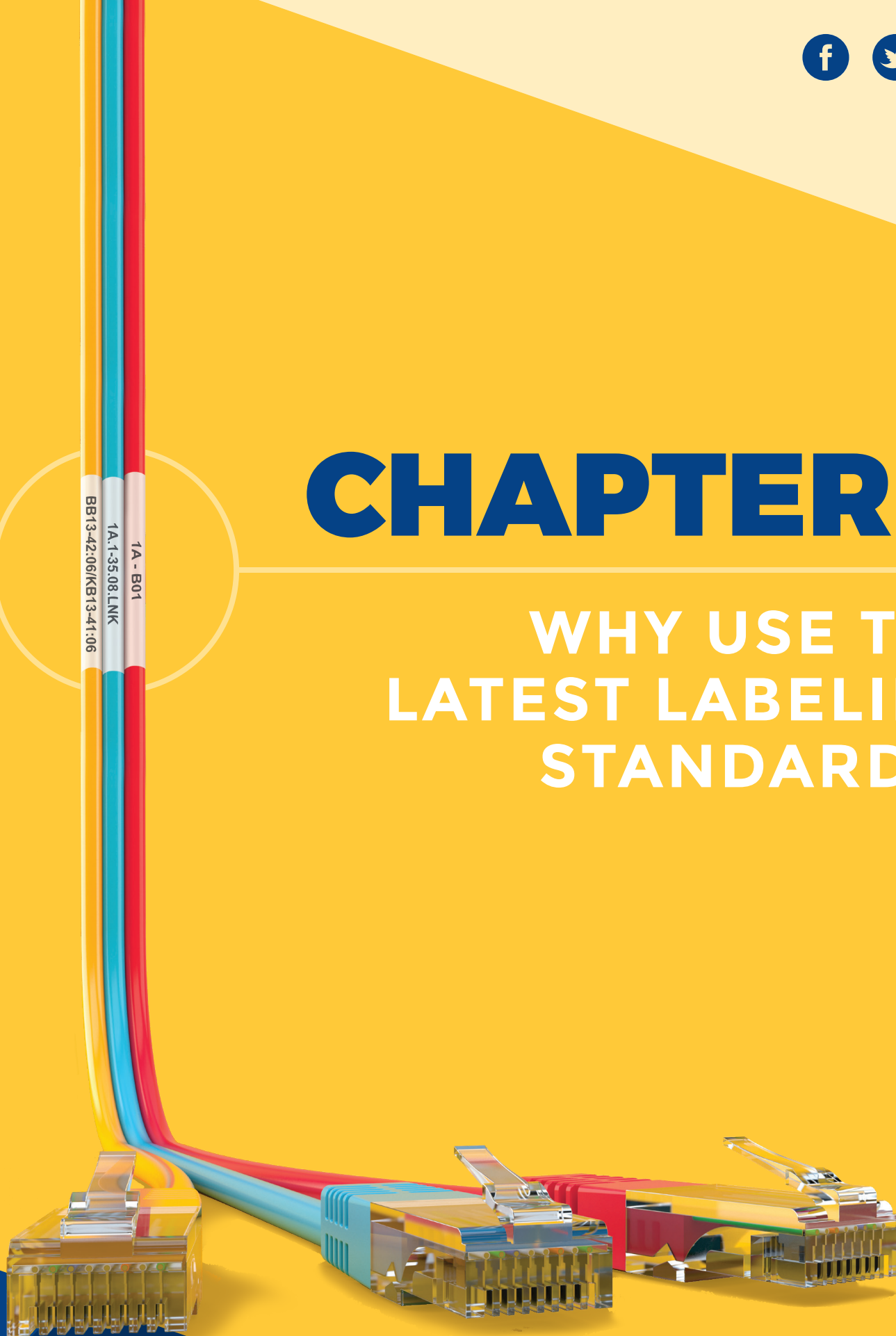
TABLE OF CONTENTS

Chapter 1: Why use the latest labeling standards?	3
Chapter 2: A brief history of the TIA-606 standard	6
Chapter 3: The latest standard: TIA-606-C	8
Chapter 4: What's new in TIA-606-C?	10
Chapter 5: Why follow 606-C?	13
Chapter 6: How to properly identify cables according to TIA-606-C	16
Chapter 7: How to make it easier to follow 606-C:	19
The 6 things your handheld printer should have	20
The top 4 things to look for in labels	23
Invest in the right software	25
What now?	26



CHAPTER 1

WHY USE THE LATEST LABELING STANDARDS?





Why use the latest labeling standards?

Effective cable labeling helps you add value to your operations with organized installations that you can take pride in. Keeping up with best practices can benefit your company and your customers with increased efficiency, profitability and customer satisfaction. Properly labeled systems benefit all of us – installers and contractors, IT technicians, owners and businesses.

The data explosion – Labeling has become far more important in recent years with the rise in data center growth and implementation of ANSI/TIA labeling standards, including the latest TIA-606-C standard.

In 2013, sales of telecom and datacom equipment and software came to

\$183 billion

It's estimated that service providers and enterprises spent

\$1.01 trillion

on telecom/datacom gear and software from 2014 to 2018





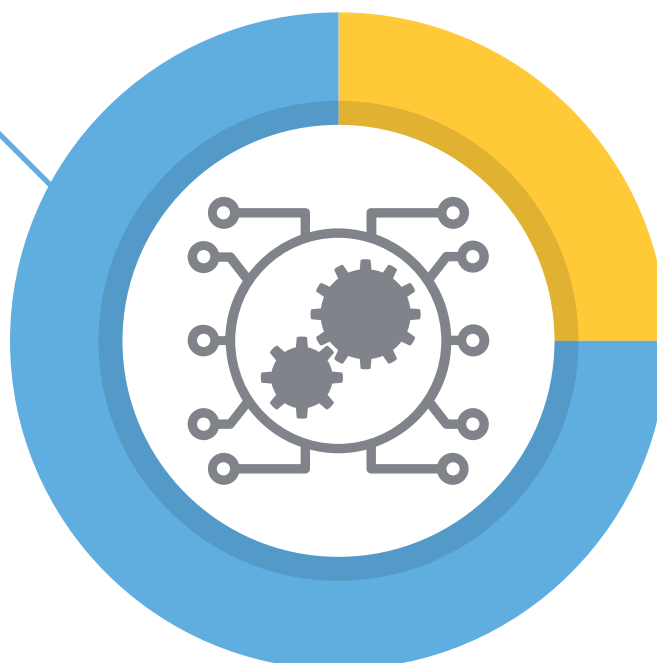
Here today, gone tomorrow – Network structure is never static and is always changing to keep up with new technology and increased bandwidth requirements. Cables placed today will be replaced tomorrow.

The wireless world needs to be wired – As we move to a “wireless” world, the amount of cabling in facilities will increase as more devices are connected and dated systems are upgraded.

An investment worth making – While labeling is only one part of a successful structured cabling or data center installation, it plays an important role in ensuring maximum uptime and audit compliance for your customers.

75%

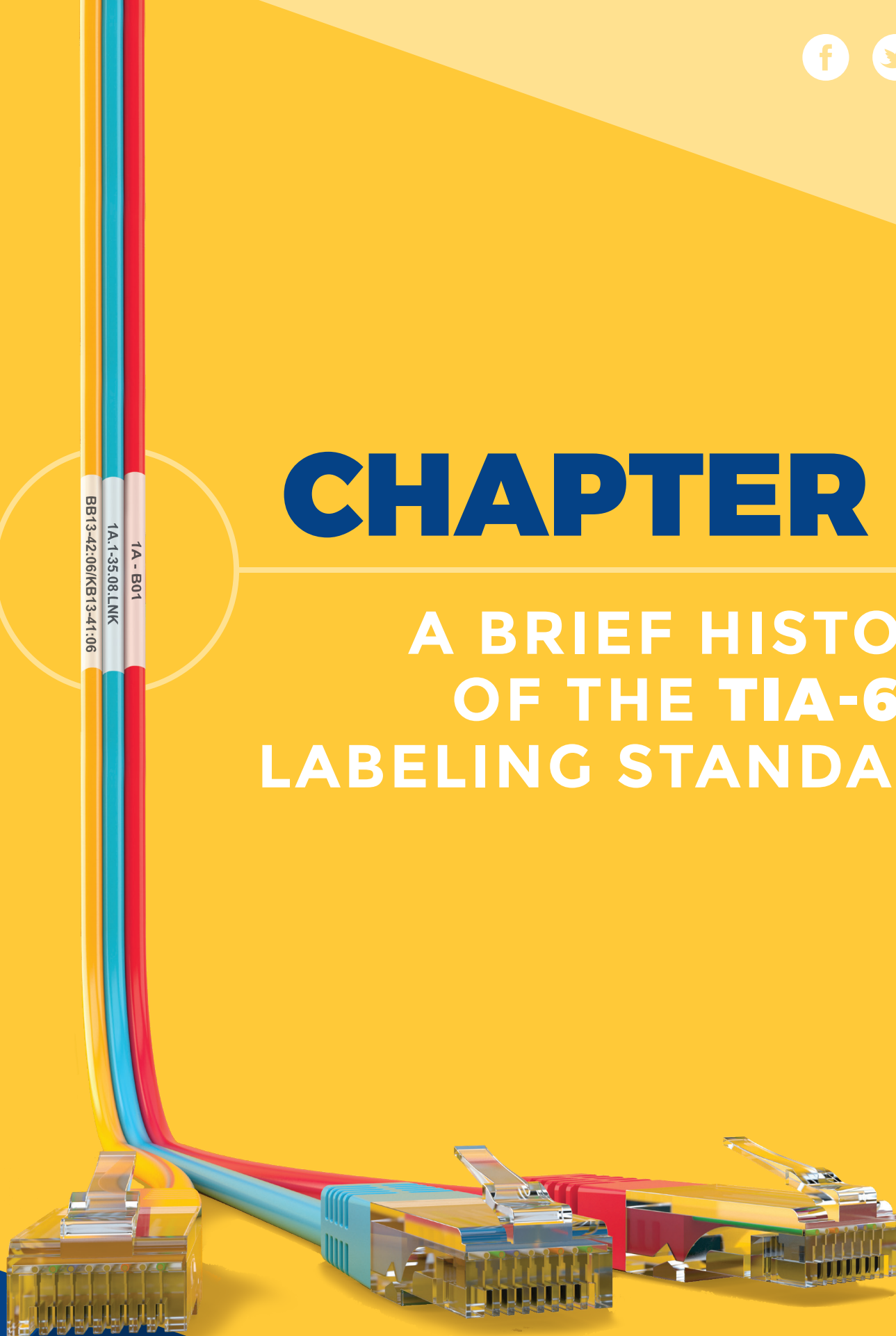
of data moving right now is generated by machines and building automation.





CHAPTER 2

A BRIEF HISTORY OF THE TIA-606 LABELING STANDARD





A brief history of the TIA-606 labeling standard

In 2002, the Telecommunications Industry Association (TIA), which develops standards for the information and communications technology industry, set the first voluntary TIA-606-A standard.

This established a minimum level of information that should be included on cable labels. It defined a labeling standard that maps a cable precisely to the floor, telecom room, and patch panel position or block position on which it's terminated. It included both color-coded and alphanumeric guidelines for all networking and structured cabling components, which set it apart as a logical and sensible solution.

The move to TIA-606-B. In 2012, the TIA updated the standard to TIA-606-B, which included specifications for labeling and administrative best practices across all networked systems classes. It covered more facility classes of every size and type, from small office buildings to large commercial enterprises, corporate campuses and data centers, and added more granularity to identification locations within each of these facilities.

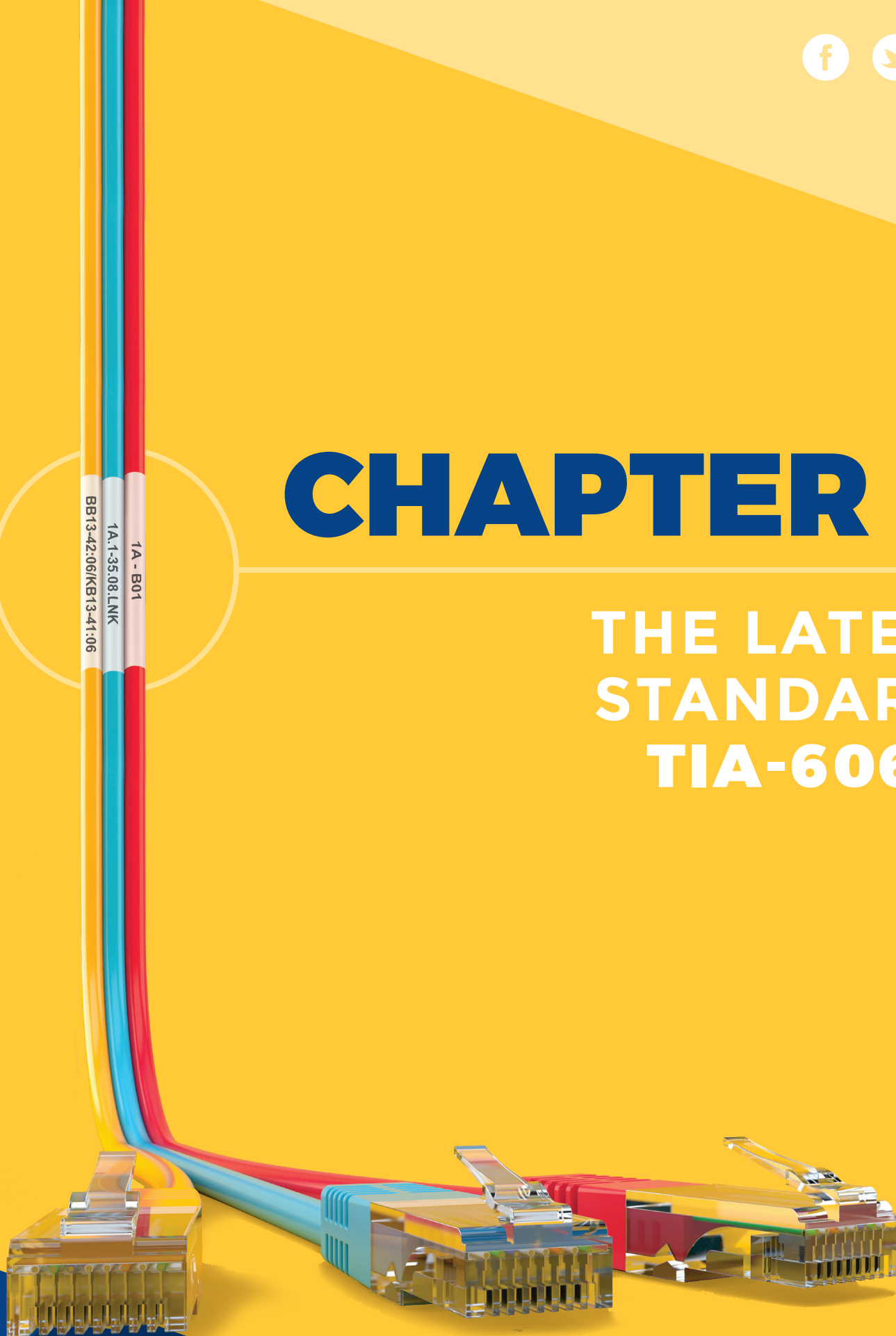
In July 2017, the standard was updated to its current “C” revision.





CHAPTER 3

THE LATEST
STANDARD:
TIA-606-C



The latest standard: TIA-606-C

The TIA-606-C standard specifies administration systems for telecommunications infrastructure within buildings (including commercial, industrial, residential and data center premises) and between buildings. This infrastructure may range in size from a building requiring a single telecommunications space (TS) and associated elements, to many TSs and associated elements in multiple campus locations. This standard applies to administration of telecommunications infrastructure in existing, renovated and new buildings.

[View the official standard](#)



Color coding labels is recommended, but not required. Compliant coding may be accomplished using color labels or color bands.

[Get more information on color coding on page 24](#)



CHAPTER 4

WHAT'S NEW IN TIA-606-C?



What's new in TIA-606-C?

Much of the TIA-606-B standard still applies within the TIA-606-C standard, but there are some new additions and updates.

Annex D: Annex D provides additional guidelines for administration of cabling supporting remote powering, including cable bundle identifier scheme. It's an important development because it allows automatic infrastructure management systems from different manufacturers to work together.

Changes to the identifier scheme for telecommunications grounding and bonding system elements:

These changes specify the use of terms compatible with ISO/IEC 30129. Legacy terms used in versions of the TIA-607 standard earlier than revision C also will be allowed.

It's an important development because it allows automatic infrastructure management systems from different manufacturers to work together.





Identifier schemes for telecommunications bonding and grounding system elements changed to align with TIA-607-C:

- BCT (bonding conductor for telecommunications) changed to TBC (telecommunications bonding conductor)
- RGB (rack grounding busbar) changed to RBB (rack bonding busbar)
- GE (grounding equalizer) changed to BBC (backbone bonding conductor)
- TGB (telecommunications grounding busbar) changed to SBB (secondary bonding busbar)
- TMGB (telecommunications main grounding busbar) changed to PBB (primary bonding busbar)

Additional updates:

- TIA-606-B-1 content replaced with a reference to TIA-5048 (adaption of ISO/IEC 18598)
- The preference for an ISO/IEC TR 14763-2-1 compatible format for new administration systems was removed
- Table summarizing variables used in identifier formats added





CHAPTER 5

WHY FOLLOW TIA-606-C?





Why follow TIA-606-C?

Makes your job easier – Following the standard takes the guesswork out of creating labels in the office or on the fly.

Improves your efficiency – Reduce time spent creating labels to streamline your entire installation and labeling process.

Best practice – TIA-606-C is the industry standard, making the network easier to follow for your customer's current and future team members.

The mark of professionalism – Clear, durable labeling according to TIA-606-C standards is a sure sign of your experience and expertise.

Ensures compliance with warranties – Some cable warranties are dependent upon successful labeling and documentation being turned in directly to the cable manufacturer as proof of system installation. Since cable warranties are a key factor in many buyers' purchasing decisions, successfully certifying a system by supplying this type of information to the manufacturer is extremely important.



Following the standard takes the guesswork out of creating labels in the office or on the fly.



Improves record keeping – The standard requires you to link a record for each identifier that is printed on a label, allowing your customer to have a well-documented infrastructure that can be understood and managed by anyone responsible for making moves, adds or changes.

Increases customer satisfaction – Clients appreciate that their projects, whether large or small, are installed in full compliance with all applicable standards. From the building owner's perspective, a non-labeled plant becomes a liability because they can't get competent maintenance work done cost-effectively. It also reduces the time and cost associated with identifying and tracing a cable when problems occur or when a move, add or change is required.

Creates new business opportunities – Installers sometimes turn down repair and maintenance bids because cable tracing is labor-intensive and time-consuming. Adopting TIA-606-C standards makes it easier for you to bid competitively on future jobs when expansion occurs or maintenance is needed.

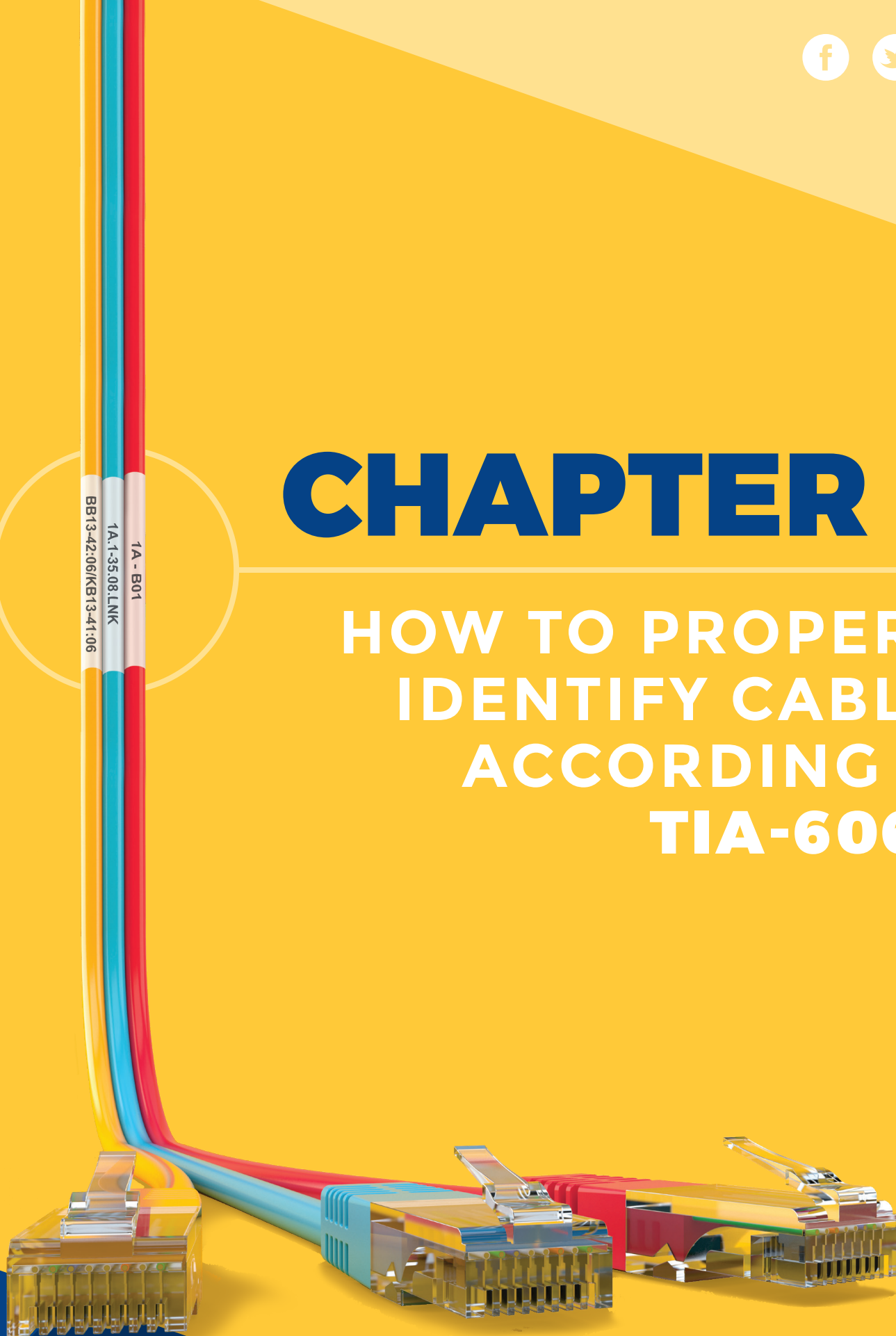
Reduces liability – Future maintenance workers can perform repairs, installation updates and upgrades in a safer, more secure way, with a reduced risk of human error.

Faster troubleshooting – Being able to identify information about cables quickly makes it faster and easier to troubleshoot issues.



CHAPTER 6

HOW TO PROPERLY IDENTIFY CABLES ACCORDING TO TIA-606-C



How to properly identify cables according to TIA-606-C

Each of the following components must be clearly labeled with the appropriate identifiers:

- Telecommunications space
- Data center room grid
- Racks and cabinets
- Patch panels
- Ports
- Cabling
- Pathways
- Work area outlets
- Grounding busbars
- Firestop locations

Original LINK Identifier

Telecom Room A
Floor 1

Patch Panel B
Port 1

1A - B01

LINK Identifier not terminated in the same space

Patch Panel at Rack Unit 35

Rack 1

Telecom Room 1A

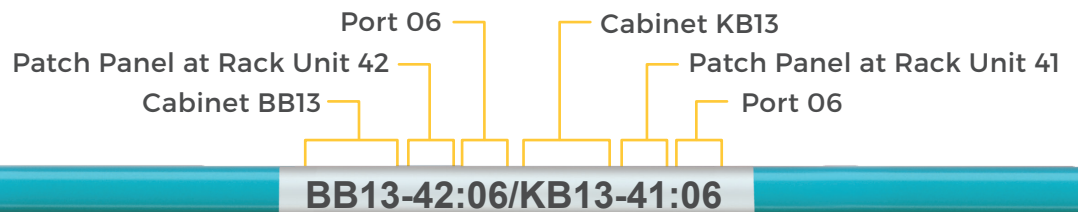
Port 8

Horizontal Link Identifier

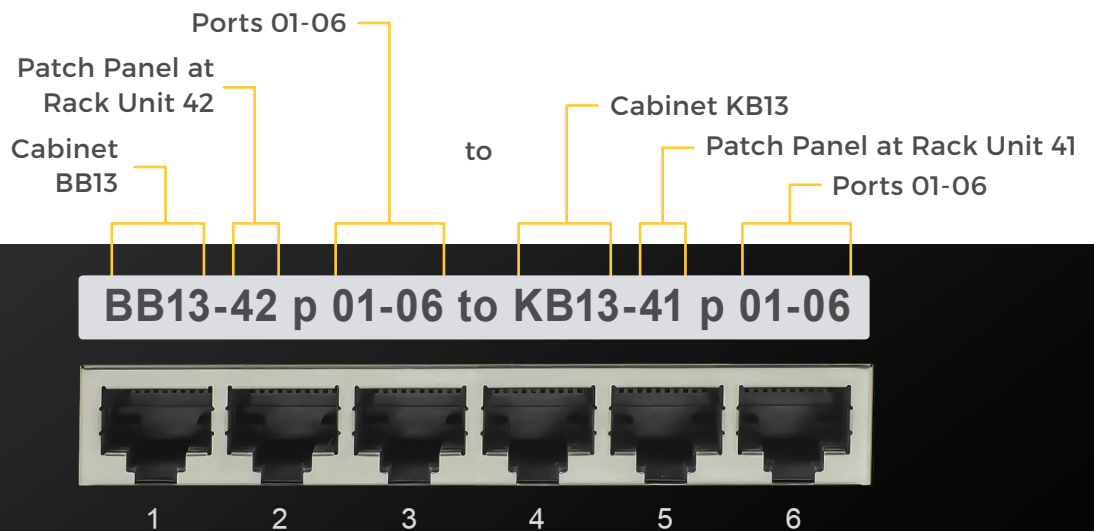
1A.1-35.08.LNK

How to properly identify cables according to TIA-606-C

LINK Identifier terminated in the same space



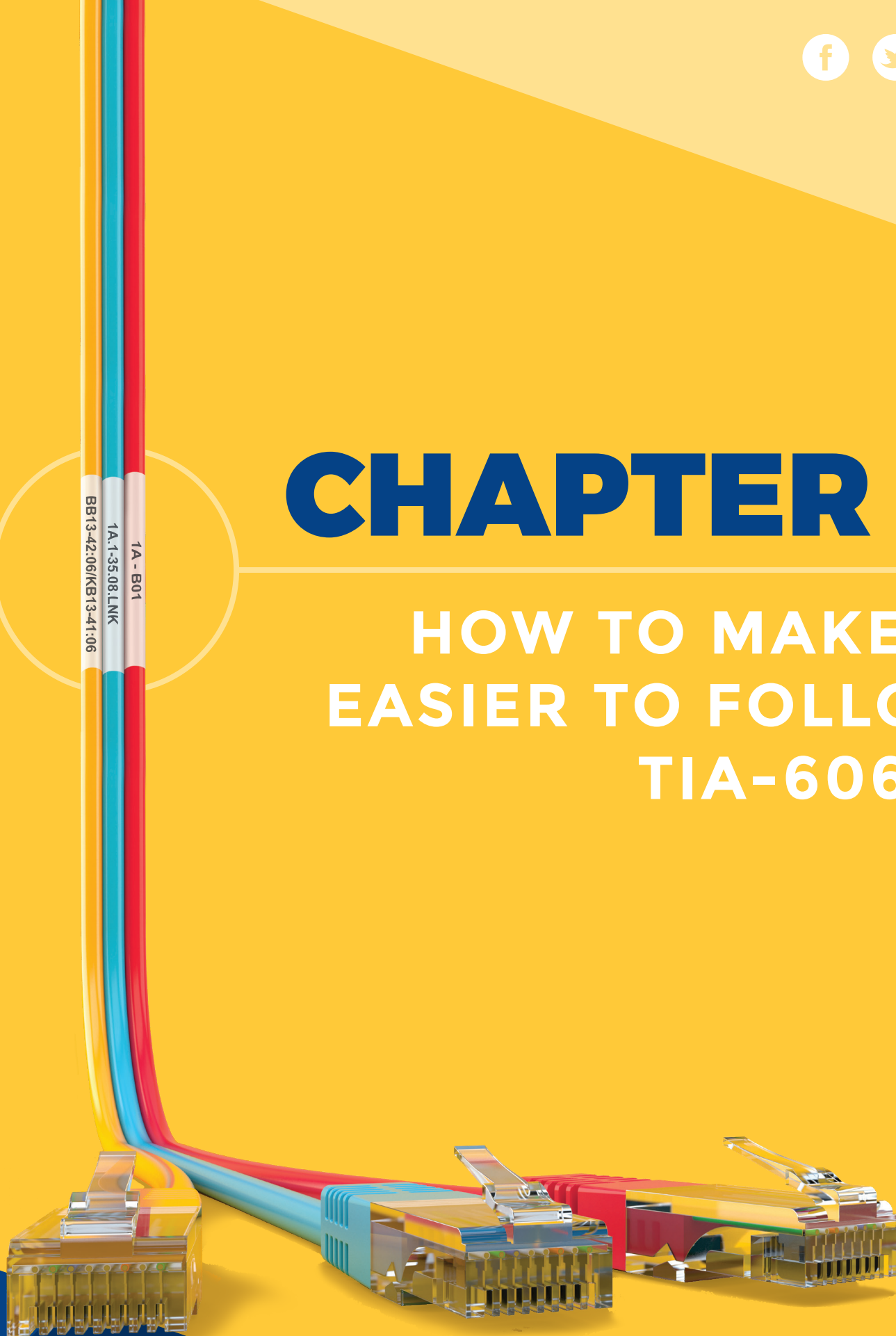
Patch Panel Identification





CHAPTER 7

HOW TO MAKE IT
EASIER TO FOLLOW
TIA-606-C





How to
make it easier
to follow the
TIA-606-C
standard

1 Invest in the right handheld printer

Choosing the right handheld printer can make it easy to create labels that follow TIA-606-C guidelines.

The 6 things your portable printer should have:

1. **Wireless + Bluetooth connectivity** – These capabilities allow you to set up and print labels from any location. You can create your own network, connect a laptop or tablet to your printer and access data from file sets to print accurate labels in the field.
2. **300 DPI high-resolution printing** – When you're printing 11-12 characters per line on a 2" label, you need high-resolution printing to make it legible. Look for a high DPI that will print labels with clear text, UPC codes, industry symbols and graphics.





How to
make it easier
to follow the
TIA-606-C
standard

3. **USB port** – Import structured text data sets (such as .CSV files), lists and graphics from your laptop or tablet, which also reduces keying mistakes. You can also use it to plug in a full-size keyboard for bigger jobs.
4. **Built-in sequencers** – Look for built-in macros so you can download and print custom or preformatted label templates, as well as run and print alphanumeric sequences.
5. **Barcoding capabilities** – Make sure this functionality is built into your printer's firmware so you can print bar codes and enable RFID tracking of assets and materials.
6. **Cooperation with benchtop printers** – Make sure your portables collaborate with your benchtop units so you can easily share data and files, and print on the go.



**How to
make it easier
to follow the
TIA-606-C
standard**

Other features to look for:

- A large and well-lit screen for quick viewing and selection of labels
- A QWERTY keyboard to help you input text correctly
- Formatted label designs
- Easy-to-navigate menus
- Storage allowance and PC connectivity for downloading data
- Smart application keys with preformatted templates, for the types of labels needed for electrical, telecom, datacom, audio/video and security system work
- Rechargeable NiMH batteries that can print more than 2,000 labels
- Rugged construction
- Automatic smart font-sizing technology
- The ability to accept a variety of interchangeable tape cartridges to create different types of labels
- The capability to make both continuous labels and die-cut labels and automatic label setup, allowing the printer to automatically recognize the label part installed and default to the correct rotation, format, size and font when it is turned on

WANT ALL THIS AND MORE?

Check out the Brady® BMP® 61 and BradyPrinter M611 with Express Labels mobile app, our best handheld printer for efficient identification of wires, cables and components.

Visit BradyID.com/label-printers.





How to
make it easier
to follow the
TIA-606-C
standard

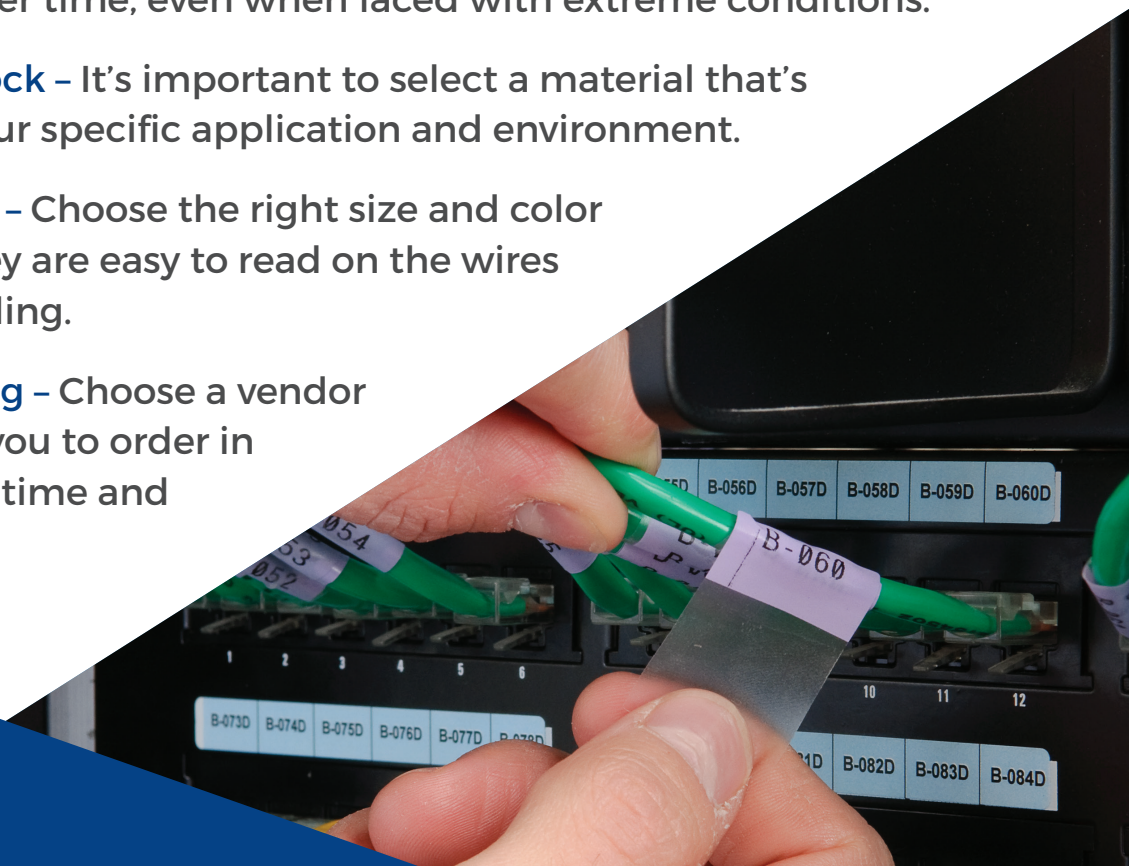
2 Invest in the right labels

The largest expense in cable labeling is the labels themselves. But choosing labels primarily on price can leave you with unreliable materials that can actually increase your overhead.

Using labels you trust quickly improves the effectiveness of your daily tasks. When you can rely on your labels to stay put, remain readable and provide the information you need, you can focus on the more essential parts of your job.

Top 4 things to look for in labels:

1. **Durability** – Labels should be waterproof, tear resistant and scratch resistant, and retain their stickiness in hot and cold temperatures. Ink should be just as rugged – make sure it will stay clear over time, even when faced with extreme conditions.
2. **The right stock** – It's important to select a material that's made for your specific application and environment.
3. **Easy to read** – Choose the right size and color labels so they are easy to read on the wires you're installing.
4. **Bulk ordering** – Choose a vendor that allows you to order in bulk to save time and money.



3 Color coding

Using color-coded labels gives visual clues as to what the cables are used for and how they're connected to the panel or grid. Colored labels are versatile, and they're easier to install or change than a wire jacket.

- Choose a vendor that offers both colored self-lams and portable material, such as vinyl tape, so you always have the materials you need.
- Make sure your portable printer has a two-cartridge system so you can mix and match ribbon color and material color (e.g., print black ink on a red label).

See our entire stock of labels, including colored self-lams, at www.BradyID.com/labels

How to make it easier to follow the TIA-606-C standard

Pantone color

Orange 150C

Demarcation point – (central office termination)

Green 353C

Network Connection – Termination of network connections on the customer side of the demarcation point

Purple 264C

Common Equipment – Termination of cables originating from common equipment (PBXs, computers, LANs and multiplexers).

White

First Level Backbone – First-level backbone telecommunications media termination in the building containing the main cross-connect (main cross-connect to TR or main cross-connect to local intermediate cross-connect). Purple in Canada.

Grey 422C

Second Level Backbone – Second-level backbone telecommunications media termination in the building containing the main cross-connect (local intermediate cross-connect to TR). Purple (in USA) or white (in Canada) may be used to identify second-level backbone terminations in buildings not containing the main cross-connect

Blue 291C

Horizontal Cabling – Termination of station telecommunications media; required only at the TR and equipment room end of the cable, not at the telecommunications outlet

Brown 465C

Interbuilding Backbone – Interbuilding backbone cable terminations (main cross-connect to remote intermediate cross-connect)

Yellow 101C

Auxiliary & Miscellaneous Circuits – Termination of auxiliary circuits, alarms, maintenance, security and other miscellaneous circuits

Red 184C

Key Telephone Systems – Termination of key telephone systems



How to
make it easier
to follow the
TIA-606-C
standard

4 Invest in the right software

Label management software is an essential tool to track and manage the hundreds and even thousands of labels you print for the cables and wires on a network.

Top 5 things to look for in printer software:

1. **Import/export** – Automatically extract and import data from other programs such as CAD packages, spreadsheets and databases, saving you time and money.
2. **Label selection** – This function allows you to automatically select the optimum label for a particular application, simplifying and speeding up your label creation.
3. **Text and legends** – Generate text, numbers and legends that are compliant with industry standards, including UL, ANSI, TIA/EIA.
4. **Built-in app-specific sequencers** – This built-in tool can handle multiple alphanumeric sequences and sequence multiple areas within the facility, simplifying your labeling duties.
5. **Mirror print** – Print to both sides of the label to improve readability no matter how the wire is positioned in the network or on the panel.

WHAT NOW?

**MAKE SURE YOU'RE
USING THE PRINTERS,
LABELS AND SOFTWARE
THAT WILL MAKE IT
EASY TO FOLLOW THE
LATEST TIA-606-C
STANDARD.**



Explore Brady labeling
solutions at www.BradyID.com