What happened to Division 17? and what is CLA?

A Strategic Plan for
Communications, Life Safety and
Building Automation Systems

Discussion Points

- History of MasterFormat and CLA
- CLA Consultant
- What BICSI's is doing to help

History of MasterFormat™

MasterFormat ™- 60s

- CSI created in early 60s
  - 1961: Format and Arrangement of Specifications and Related Documents - Draft
  - 1962: Format and Arrangement of Specifications and Related Documents - Second Draft (22 divisions)
  - 1963: CSI Format for Building Specifications
- **1964: "The CSI Format for Construction Specifications"** (16 divisions)

The CSI Format for Construction Specifications

BIDDING REQUIREMENTS

CONTRACT FORMS

GENERAL CONDITIONS
(And Supplementary General Conditions)

SPECIFICATIONS

Division 1—General Requirements
Division 2—Site Work
Division 3—Concrete
Division 4—Masonry
Division 5—Metals: Structural & Miscellaneous
Division 6—Carpentry
Division 7—Moisture Protection
Division 8—Doors, Windows, and Glass
Division 9—Finishes
Division 10—Specialties
Division 11—Equipment
Division 12—Furnishings
Division 13—Special Construction
Division 14—Conveying Systems
Division 15—Mechanical
Division 16—Electrical

1964 Format for Specifications

- 1964 Document Content - 28 total pages
  - Title Page
  - Introduction and explanation - 11 pages
  - Format listings - 11 pages
  - Alphabetical subject listings - 5 pages
- 1995 MasterFormat™ - 317 pages

1964 Format for Specifications

- **Purpose:** Create national (consensus) format for construction specifications - "standardized table of contents"
  - Designed for maximum flexibility
  - Designed for maximum utility
- **Coverage:** Building construction & related site work

1964 Format for Specifications

1 General Requirements
2 Site Work
3 Concrete
4 Masonry
5 Metals:
Structural & Miscellaneous
6 Carpentry
7 Moisture Protection
8 Doors, Windows, & Glass
9 Finishes
10 Specialties
11 Equipment
12 Furnishings
13 Special Construction
14 Conveying Systems
15 Mechanical
16 Electrical

Uniform Construction Index

- **1972 - "Uniform Construction Index" (UCI)** merger of US & Canadian formats **system of formats** for:
  - Specifications - 16 divisions
  - Data Filing - 16 divisions
  - Cost Analysis - 16 divisions
  - Project Filing - not related to other three

Uniform Construction Index

A System of Formats for Specifications, Data Filing, Cost Analysis and Project Filing

1978-1983 MasterFormat ™

- Officially adopted by federal agencies
- Also fully incorporated by:
  - Sweets in cataloging manufacturer's catalogs
  - RS Means for cost estimating data

1983 EDITION

MASTERFORMAT

MASTER LIST OF SECTION TITLES AND NUMBERS

MANUAL OF PRACTICE

The Construction Specifications Institute

Construction Specifications Canada

MasterFormat™ Organization

MF 95

Groupings

Divisions (construction products and activities only)

No numbers/Documents/Sections

MF 04

Groups

Sub-groups (specifications subgroup only)

Divisions

Documents/Sections

MasterFormat™ Organization

MF 95

Groupings

- Introductory Information
- Bidding Requirements
- Contracting Requirements

- Facilities and Spaces
- Systems and Assemblies

- Construction Products and Activities

MF 04

Groups

Procurement & Contracting Documents

Specifications

MasterFormat™ Organization

- Procurement and Contracting Documents Group
  - Division 00 - Procurement and Contracting Requirements
    - Introductory Information
    - Procurement Requirements
      - Solicitation
      - Procurement Information
      - Available Information
      - Procurement Forms and Supplements
    - Contracting Requirements
      - Contracting Forms
      - Project Forms
      - Conditions of the Contract
      - Revisions, Clarifications, and Modifications

MasterFormat™ Organization

MF 95

Construction Products and Activities

Divisions 1 - 16

MF 04

Specifications Group

General Requirements Subgroup

Division 01

Facility Construction Subgroup

Divisions 02-19

Facility Services Subgroup

Divisions 20-29

Site and Infrastructure Subgroup

Divisions 30-39

Process Equipment Subgroup

Divisions 40-49

MasterFormat™ Organization

MF 95	MF 04
	General Requirements
1 General Requirements	01 General Requirements
	Facility Construction
2 Site Construction	02 Existing Conditions
3 Concrete	03 Concrete
4 Masonry	04 Masonry
5 Metals	05 Metals
6 Wood and Plastics	06 Wood, Plastics & Composites

MasterFormat™ Organization

MF 95

7 Thermal & Moisture Protection
8 Doors and Windows
9 Finishes
10 Specialties
11 Equipment
12 Furnishings
13 Special Construction
14 Conveying Systems

MF 04

07 Thermal & Moisture Protection
08 Openings
09 Finishes
10 Specialties
11 Equipment
12 Furnishings
13 Special Construction
14 Conveying Equipment

MasterFormat 2004

MF 95

15 – Mechanical

13 – Special Construction

16 - Electrical

MF 04

Facility Services

20 - Reserved

21 - Plumbing

22 – Heating, Ventilating, and Air Conditioning

23 - Fire Suppression

24 - Reserved

25 - Integrated Automation & Control (A

26 - Electrical

27 – Communications (C)

28 - Electronic Safety and Security (L)

29 – Reserved

MF 95

2 – Site Construction

MF 04

Site and Infrastructure

30 - Reserved

31 - Earthwork

32 - Exterior Improvements

33 - Utilities

34 - Transportation

35 - Waterway & Marine

36-39 - Reserved

MF 95

11 – Equipment

MF 04

Process Equipment

40 - Reserved

41- Material Processing & Handling Equipment

42 - Process Heating, Cooling & Drying Equipment

43 - Process Gas & Liquid Handling, Purification & Storage Equipment

MF 95

11 – Equipment

13 – Special Construction

MF04

44 - Pollution Control Equipment

45 - Industry-Specific Manufacturing Equipment

46 - Solid Waste Equipment

47 - Reserved

48 - Electric Power Generation

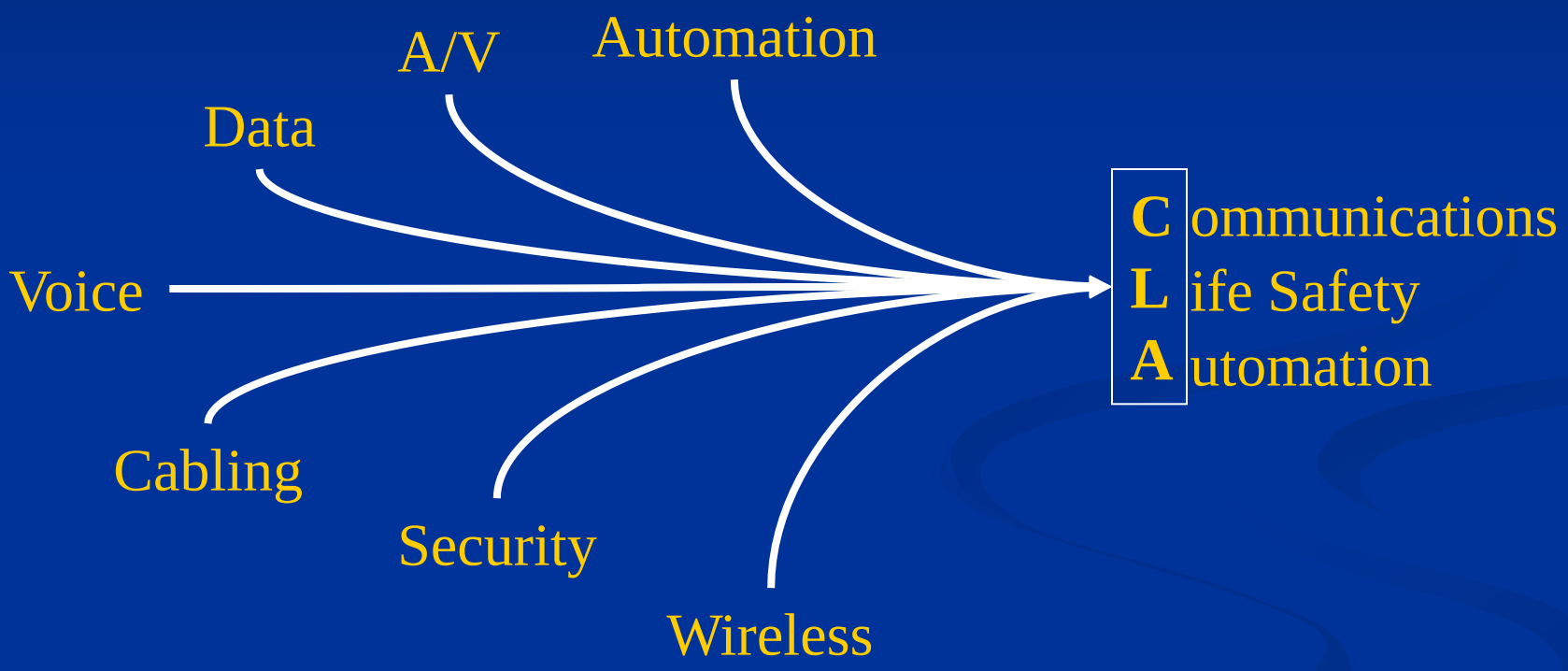
49 - Reserved

What is CLA

- Communications
- Life Safety
- Automation

- Communications Cable Plant, Data Systems, Voice Systems, Communication Services, Integrated Audio Video Systems, Distributed Communication Systems, Intercom Systems, Dictation Equipment, Paging Systems, Public Address, Other Audio systems, Sound Masking, Electronic/Digital Signage Systems, Tracking Systems, Video Systems – MATV, CATV and CCTV, Internal Cellular, Internal paging, Healthcare Systems, Nurse Call, Hospitality and Entertainment Systems, Clock Systems, Access Control, Electronic Surveillance Systems, Intrusion Detection Systems, Detection and Alarm, Personal Protection Systems, Integrated Automation Instrumentation and Control

It is an Industry that has Evolved



MF History

1984 – Deregulation

1988 – MasterFormat 1988

1995 – MasterFormat 1995 – current edition

1996 – Telecommunication Act

1998 – 1st public Drafts of Division 17

1999 – 2nd Draft of Division 17

1999 – October – Presented to CSI Technical Committee

2001 – 2004 CSI Task Team Work

2004 – MF 04 with CLA Divisions

Looking Back - First steps

- The 1995 edition is the current edition, but the 1988 edition is most relevant
- Authored only a few years after 1984 deregulation of telephone industry, essentially 20 years behind the reality of the INFORMATION Industry.
- Because of the "wires" - **CLA** systems looked like "electrical" work
- If there were design requirements, the architect placed "communications" in the scope of the electrical engineer and the general contractor asked the electrical contractor for a "price" (ie. Division 16) – minimized perceived liability

Typical Challenges

- Typically communications consultants and contractors are not well trained or familiar with working on a construction project
- They are not familiar with standard construction contracts, coordinating with other trades, producing and reading construction drawings and specifications

MEP	CLA
Code Based	Standards Based
Architectural Focused	Owner Centric
Owner Review	Owner Involved
Vendor Neutral	Vendor Influenced

Significance of CLA

- **Consider MEP – Mechanical Electrical and Plumbing**
  - Impact on Building in the late 1800's and Early 1900's
  - New Spaces and Pathways "above the ceiling"
  - New Consultants and Contractors
  - New Standards and Codes
- **Compare to CLA – Communications, Life Safety and Automation**
  - Impact on Building in the late 1900's and Early 2000's
  - New Spaces and Pathways "above the ceiling"
  - New Consultants and Contractors
  - New Standards and Codes

Realization

MEP systems transport "**energy**".

CLA systems transport "**information**"

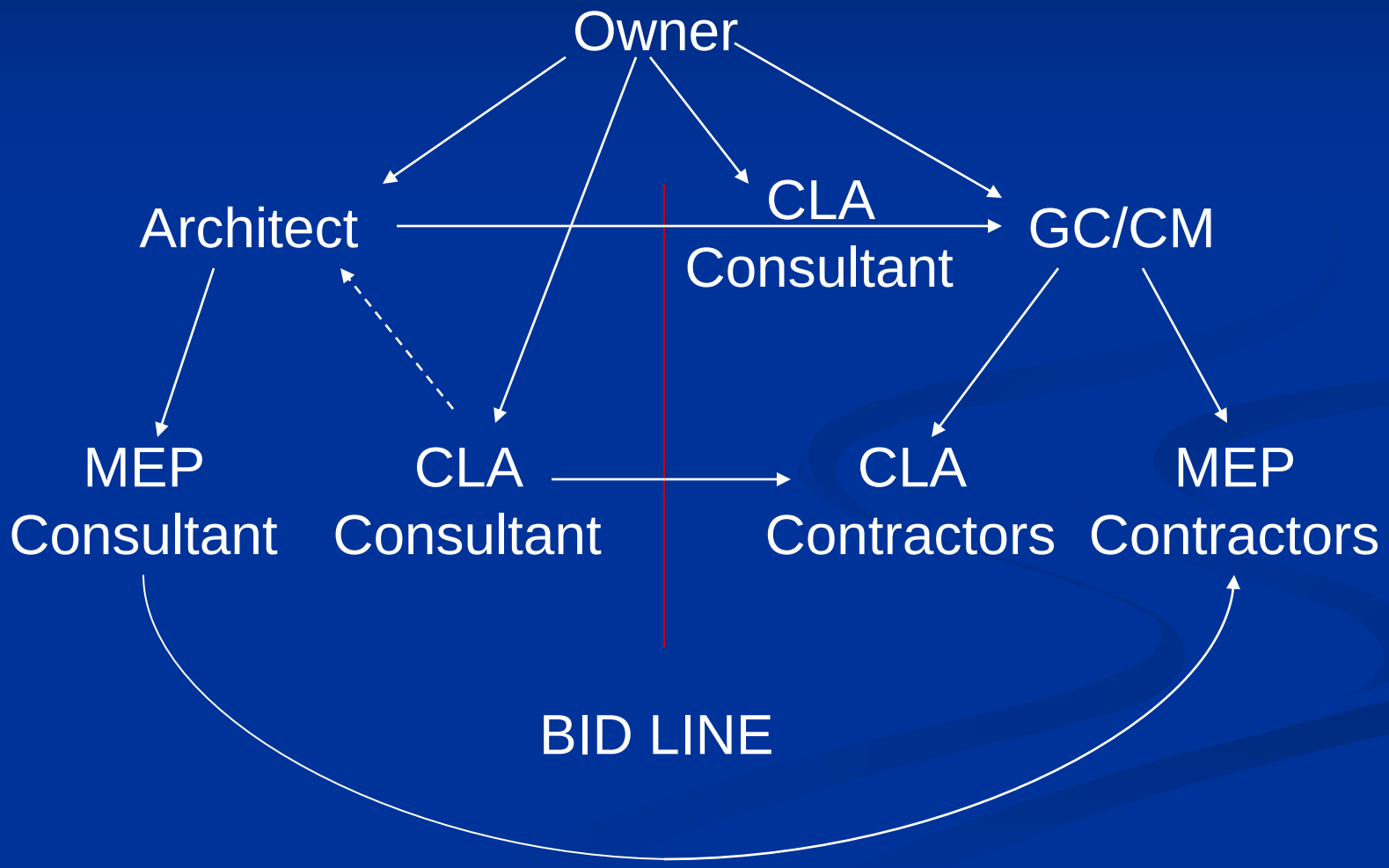
NEW! - Need for a CLA Consultant

- The role of the CLA consultant should:
  - extend from master planning as a **Strategic** Consultant
  - through design and construction as a **Project** Consultant
  - into commissioning and operation as a **System** Consultant

- Ideally, the Owners Relationship with a CLA consultant:
  - Begins well before the construction project begins with the consultant learning about the owners systems and objectives
  - It is with this broad based understanding of the owners needs that a CLA consultant can effectively design these needs into a building project

- Therefore, consideration should be given to the contract and obligations of the CLA consultant

Varied Relationships During a Project



PLANNING AND DESIGN | BUILDING AND MANAGING

CLA Systems

Communication Systems	Facility Systems	Vertical Market Systems
Voice	Alarm	Clinical
Data	Security	Financial
Video	Automation	Student

IP Infrastructure

Wired or Wireless

Pathways and Spaces

Private and Public Data Network

Example - CLA Systems in a Hospital

Administration and Planning	Facilities Department	Communications Departments	Clinical Systems
-Assessment -Technology Plans -Budgeting -Design Standards -Drawings and Documentation -Site/Civil /Architectural/ MEP	-Fire Alarm -Fire Suppression -Automation -Energy Management -Clock -Security -Access Control -Paging -Intercom -Audio/Visual	-Data Systems -Voice -Time Clock -Integrated Audio Video -Video Conferencing -Data Network Switches -Internet -Spaces -Pathways -Copper Cabling -Fiber Cabling -802.11	-Monitoring -Telemetry -Lab -Pharmacy -Radiology -Dietary -Cath/Echo etc -Nurse Call -Code Blue -IR/RF
Construction	**Division 16**	**Division 17**	**Stand Alone**

CLADI

- **Mission:** To enable and promote the CLA industry's participation in the design and construction of buildings.

- By working to **create awareness** within the design, construction and building owner communities of the CLA industry resources, associations and certifications
- By **brokering relationships** within and across industry boundaries
- By consolidating access to **CLA industry information**
- By developing and distributing **design tools** and guides for use by CLA industry professionals
- Establishment of a **broad based CLA industry design certification** that is recognized as being inclusive of all current and future design certifications. (i.e. BICSI's - RCDD, ICIA's CTS-D, ASIS's - CPP and CSI's – CDT)

CLADI Objectives

- ADVOCACY AND PROMOTION: MARKETING AND POSITIONING OF CLA INDUSTRY
- RELATIONSHIP DEVELOPMENT: OUTREACH AND ALLIANCE BUILDING
- WEB SITE DEVELOPMENT: INITIATIVE WEB SITE
- DESIGN TOOLS: DRAWING AND ESTIMATING UTILITIES AND TEMPLATES
- RESOURCE LIBRARY: MANUFACTURER WEB BASED RESOURCES AND INFORMATION