



Rationale and Classification Scheme for Project Prospectus and Outline Master Specifications

This is an information paper to explain why Digicon's Project Prospectus and Outline subsystems are classified in a manner that is slightly different than the industry norm.

Introduction

There are several traditional ways of developing project documents; there have been very few attempts in North America to improve the process and to categorize (or classify) a text base in a fundamental way. The time is overdue to re-consider the process and the manner in which document development and production must be made more efficient. The one factor that is driving this need for change is the design-build process - as this process fundamentally changes the roles of the parties in the design/construction process. Also changing is the way project documents are to be created and re-used from process to changing process.

The term "Project Prospectus" was created by our firm in order to best describe or title our master document package and to differentiate it from a PPD as defined by CSI and CSC Manuals' of Practice.

This treatise addresses two approaches for organizing:

- a Project Prospectus (PP) - a master document subsystem (Digicon's MasterPP) and
- an Outline Specification - master subsystem (Digicon's OutlineSPEC).

A Project Prospectus is actually created by all parties to a design team - individually and collectively. The common authors of a PP are design-builders and often design consultants engaged by them. A PP is actually a compilation of different documents, memos, and meeting minutes created separately by practitioners (traditionally) - but assembled into a single PP document for convenience and efficiency.

What is a PP, an OS, or a Checklist ?

What is a Project Prospectus, specifically:

- PP (Project Prospectus): A document describing in summary form, design parameters, regulatory criteria, constructed element functions, physical elements intended to be used for a project - all of which are identified during the initial stages of a project. A PP is often referred to as an "owner's brief" and can be the beginnings of defining a design-build project.

A PP is not like a project specification - a PP is a prompting cue or tool to consider certain project topics - it is a document that encourages decision making and then records those decisions for all project team members to consider and refine further.

Generally expressed, a PP includes the contents of a PPD (as explained below) but also includes code and regulatory criteria and design criteria that affect the initiation and continued development of a project. In fact, a contract to build a project can be established with a design-builder with a properly completed PP - with refinements to follow.

The following terms have been broadly defined in the Manual of Practices' of CSI and CSC. We have further refined them to mean:

- PPD (Preliminary Project Description): A document describing in summary form, building element functions intended to be used for a project - which are often identified during the initial stages of a project.
- Outline: An outline specification is a term used to depict a written document expanding the PP or similar document (perhaps a defined checklist), identified during the early to mid-stages of design but prior to a more complete specification being developed. The outline (summary) specification often follows development of a PP.
- Checklist: A tabular listing of materials, components, and assemblies intended for use on a construction project. A checklist sometimes follows the development of either a PP or precedes an outline specification. A Project Prospectus could actually be used as a checklist.

Digicon has not developed a checklist as such, but has developed a PP to serve a similar function but in a more complete way, with a broader scope of content - with reason. The typical project initiation exercise usually involves several primary factors:

- identify code and regulatory (life safety) impositions on the project,
- identify design factors that arise from code and regulatory issues plus factors that are presumed indigenous to the facility contemplated,
- identify basic elements contemplated for the project in a context that may be performance or descriptive stated,
- cost plan/budget, durability/life cycle, and financial payback of a contemplated project.

The PP serves to prompt management and design team participants to consider a range of globally related project subjects.

A PP is probably the first project document to prompt design team members to consider and elicit project design decisions. When primary PP decisions are made and identified with appropriate explanation, a more elaborate specification can be developed for all to share and use as a project develops. An outline specification may then function as a transitional document between a PP and a short-form or full-form specification for a project.

Need to Organize

Digicon has envisaged a total system strategy for construction document preparation based on logical work flow of any project from a project idea, to design, to construction, then on to occupancy. Consequently, we have created several new construction documents in the form of subsystems which comprise a "global" documentation system. This represents a newer generation of master document and specification preparation - to CAD and other related electronic documents. These subsystems are an integral part of Digicon's global concept for informational support for effective construction documents throughout a project and its processes.

This "total document production concept" includes a compilation of several subsystems for creating and managing project information as the project progresses and decisions are made. Each of our subsystems are unique to the industry by themselves or collectively. This entire concept is certainly unique to the

industry - unique in the sense that we arrange separate (stand-alone) subsystems with a view to a consolidated strategy for total document information support:

- to functionally dovetail informational document types with each other,
- to complement each other in purpose and usage with a similar interface,
- to present information at a point in time and in a manner to influence and encourage decision making,
- to follow a natural work flow of document creation - re-stating decisions already made - expanding on those decisions to a greater level of detail,
- to offer an efficient method for users to effectively produce industry acceptable documents in a form that the industry is accustomed to.

A structured sequence or hierarchal classification of this information will encourage efficient development of project specific information throughout the project concept and design processes. With a long term view to the interrelationship of current Digicon subsystems and subsystems not yet fully defined, we required a global approach to classifying (categorizing if you will), its information system and subsystems. Digicon required a subordinate subject arrangement for organizing its PP and outline specification subsystem packages as a prelude to a more encompassing master specification and construction product supported subsystems.

Digicon also addressed the need to accommodate product information classification needs to unite a comprehensive checklist, "on-line" product information help, contextual technical help, option choice assistance, and cost/value planning information. Each of these features will enhance Digicon's subsystems for effective use of a PP, an outline specification, plus our mid-sized and full-form specification subsystems.

Digicon's interim classification strategy extends to complete project information as a composite subject. It is expected that ICIS (and to a related degree, IAI) will have resolved the bigger political and technical hurdles and permit Digicon to proceed and follow their lead. In short, Digicon has taken advantage of the ISO and ICIS developments and knowledge base accrued to date and created a singular conceptual approach to classifying all construction information (as objects). Preliminary as this may be, it is a good start.

Existing Classification Methods

But what about the new CSC/CSI documents - UniFormat 1998 (UF) and MasterFormat 1995 (MF)? UniFormat and MasterFormat were consulted to offer assistance in organizing the Digicon information for both the PP and outline specification. In reviewing the individual histories of these two "format" documents, we determined from the documents' introduction:

- UniFormat was conceived and designed to be used to categorize conceptual and detailed cost information based on "elemental categories". It apparently does a good job of that evidenced by the wide acceptance by most North American cost consultants. Also, UniFormat does not identify their primary headings as "elements"; the document title is "Elemental ..."; there is a discrete and very important difference.

- MasterFormat was designed to organize and categorize full size contractual specifications. It does a reasonable job of that evidenced by the wide acceptance by North American specifiers that use it. The political influence of both CSI and CSC has a lot to do with its widespread use; perhaps including the persuasion exercised over the years by this author we have always been a strong supporter and promoter of MasterFormat.

Our Classification Approach

Development and decomposition of each of the three ISO/ICIS classifying approaches, suggest unique scenarios for developing usable classification tables. Digicon uses the following approach to classify specification subjects and to organize and develop the content of specification "sections":

- by function - suggests a good basis for classifying a PP (with little or no regard as to a technical solution - or an object's material composition).
- by object or assembly - suggests a good basis for classifying an outline specification and more detailed short-form and long-form specification subsystems:
 - by object - in a broad context (eg: system or assembly) for an outline specification.
 - by object - in a narrower context (eg: components and products) for short-form and long-form specifications.

Digicon requires the flexibility to specify a complete and functioning assembly as an operating entity with distinct 'function' criteria. This is foreseeable in either an outline, short-form, or long-form specification.
- by location - will be indigenous in each of the above approaches but only in descriptive or explanatory statements within the subsystem's text.

It would therefore be desirable when viewed very broadly, to have a path or avenue of classifying logic from our PP, to our OS, to our mid-sized specification, and to our full-size specification. Recognize that a user may select any one or several document forms to suit any project, without regard to document flow or classifying of subsystems, as described above.

Neither UniFormat nor MasterFormat were entirely adequate for our purposes, primarily due to their lack of flexibility and their inconsistent organizational philosophy from category to category (in UniFormat) and division to division (in MasterFormat). In fact, in our view, neither document is a "classification system" nor a "format document" in a true sense, in spite of their widespread use as such in the industry.

So what Digicon is using is a compromise approach. This approach offers Digicon the flexibility we need and still permits us to honestly declare that UniFormat and MasterFormat did in fact form the basis for classifying our subsystems. Digicon can still convert the organization of our subsystems to parallel UniFormat and MasterFormat if necessary politically. The price for doing so will be some loss of information flow and some loss of effective graduation to the next upper or lower level of document in our subsystems.

Digicon has developed the following subsystems in this context with project information flowing from:

- a Project Prospectus,
- to an outline specification,
- to a shortened-form specification,
- then on to a full-form specification.

Digicon's PP Classification Approach

Digicon's hierarchal classification structure for PP development. The principal Level 1 titles for our Digicon PP classification are:

PP-1	Project Criteria
PP-2	Site
PP-3	Substructure
PP-4	Superstructure
PP-5	Exterior Closure
PP-6	Interior Separation
PP-7	Interior Specialties
PP-8	Environment Services
PP-9	Electric Services

These 9 PP titles address subjects that are normally addressed during the very early stages of project (building) design development. The sequence of these PP titles tend to follow a hypothetical construction sequence. These titles also reflect the general content of "UniFormat - 1998 Edition". In fact in simple terms, this classification is simply a re-arrangement of the subjects in UniFormat - but arranged to permit a relationship with MasterFormat.

Our PP classification tables are set out in a broad conceptual hierarchal structure. To consider the ISO and ICIS rationale, the levels could also be considered (in very broad terms) as follows:

Level 1 = Elements (and resources)

Level 2 = Designed Elements (assemblies, components, products, materials)

Our first category, "PP-1 - Project Criteria" does not now exist in UniFormat or anywhere else that we can determine. It contains information that is crucial to all aspects of project document development, both drawings and specifications, as well as other primary documents in the project decision tree.

A Side by Side Comparison of Each System

The following example illustrates how each of the three classification approaches stand alone as well as relating to each other.

- the left column addresses an element (without a design solution),
- the second column addresses a variety of elements (with a partial or conceptual design solution),
- the third column addresses specification subjects of a typical mid-sized project which may be used to bid and contract a project,
- the right column addresses the actual materials, resources, and activity of constructing the complete element with details and contractual requirements.

PP	Outline Specification	Mid-Size Specification	Full Specification
PP-3 Substructure PP-4 Superstructure	03-10 - Concrete Frame 03-20 - Fabricated Concrete 03-30 - Associated Concrete 03-40 - Concrete Restoration	03300 - Concrete 03400 - Precast Concrete	03050 - Basic Concrete Materials and Methods 03100 - Concrete Forms and Accessories 03200 - Concrete Reinforcement 03300 - Cast-in-place Concrete 03400 - Precast Concrete 03500 - Cementitious Decks and Underlayment 03600 - Grouts 03700 - Mass Concrete 03900 - Concrete Restoration and Cleaning

- In the left column, the use of concrete may appear in both PP-3 and PP-4 as a possible design solution to constructing the substructure and perhaps the superstructure.
- In the Outline Specification column, concrete is addressed as a product in somewhat more detail but expressed in its different forms.
- In the Mid-Size Specification column, concrete is addressed as a single product expressed in some detail and differing methods of creation (site-cast, post-tensioned).
- In the Full Specification column, concrete is addressed as a variety of concrete products expressed in even more detail and in differing methods of creation (site-cast, precast, post-tensioned).

Summary

Our master documents and master specifications are intended to be used to address a wide variety of users and an even wider variety of project types. Each subsystem can stand on its own or can be used in combination with one or more other subsystems. Our documents are easily referenced internally and can relate directly to our other documents.

Project information that a user is committing to document form must be easy (and efficient) to develop, be contractually enforceable, as well as be informative to others in the design/construction process.

Wayne Watson, RSW, FCSC, CCS, FCSI, *Vice-President of Digicon Information Inc., a construction software development and construction information marketing firm.*

Digicon Information Inc.

Camrose
4514 - 47 Street
Camrose Alberta Canada T4V 1J1
Telephone: 403-672-8525
Toll-Free (Western Canada): 800-610-SPEC
Facsimile: 403-672-9882
E-mail: w2@digicon.ab.ca

Calgary
125 Covington Bay, N.E.
Calgary Alberta Canada T3K 4A9
Telephone: 1-403-226-3272
Facsimile: 1-403-226-3272
E-mail: david@digicon.ab.ca

Copyright 1977/1998 - All Rights Reserved: CmSPEC©, MiniSPEC™, OutlineSPEC©, MasterPP©, and MacroSUITE© are products of Digicon Information Inc., Camrose AB Canada. RenoSPEC© is a product of Renovation Systems Associates, Dallas TX USA.