

SUBJECT: Corps Specifications Steering Committee Meeting

1. The Specifications Steering Committee met 7 - 8 December 2000, at the Crowne Plaza hotel in Washington D. C. Attendance list and Agenda are attached as enclosures 1 and 2, respectively
1. A motion was made to approve the June 2000 Meeting Minutes. The minutes for the June 2000 meeting were approved, as amended.
2. HQUSACE UPDATE (Rick Danke)
 - a. Headquarters completed moving Engineering & Construction to Belvoir. Although most people are happy, there is already discussion of bringing them back. But the office would not be moved again for another 2 to 3 years.
 - b. Military program budget for criteria is 2.5 million. The money has been appropriated.
 - c. The Civil Works program budget includes \$834K for manuals, and \$246K for specifications. The money has not been approved for civil works yet. The funding could be appropriated before Christmas, but Rick believes that schedule is overly optimistic.
3. SPECSINTACT INTERAGENCY CONFIGURATION CONTROL AND COORDINATING BOARD (SICCCB) UPDATE (Steven Freitas)
 - a. SpecsIntact (SI) Version 3 enhancements:
 - i. Programming is based on 32 bit for Windows 95, Windows 98, Windows NT and later.
 - ii. Help files on version 3.0 are much improved and expanded from version 2. There are quick tours for both experienced users and new users available for downloading.
 - iii. SI has an Explorer View like MS Explorer in place of the Jobs module of the SI Version 2. Version 2 could only access one working directory at a time. Version 3 can access multiple working directories. WordSpec documents are filed in separate directory, making it easier to manage these documents. New properties features have been added. For example, the status variable, Amendment, defines the name of the directory for saving PDF files when they are created.
 - iv. There is an E-mail feature within SI, which makes it easier to share work between designers in different locations editing the specifications.
 - v. The new editor will have a new tag (URL) for hyperlinks to web sites or other sections. It will work similar to what is in MS Word now. The hyperlinks should still be hot after the files are written in .pdf for EBS .
 - vi. The hyperlinks for references can link to standards organizations. This will not pull up the referenced document, but gives source for obtaining the documents. The guide specs can be updated

for these hyperlinks. Jim Quinn suggested this may just be done in the single master reference list, instead of every section.

vii. SI is not fully XML compliant. The 32-bit editor should be able to support tables and inserted graphics, but it is a low priority for the SICCCB.

viii. The page control features, make it easier to reissue pages for amendments.

b. There is no problem in switching to version 3 with work in progress on jobs. However, users still on version 2 may not be able to access all directories and files stored with version 3.

c. HQ has purchased Adobe Acrobat 4.0 with PDF Writer and Distiller for all Districts. There were some questions regarding specifics of the licensing agreement.

d. SICCCB is opposed to modifying SI to show section attachments in the Section Table of Contents. Their reason is that CSI criteria reportedly state all attachments should be project attachments.

Follow Up Note: In the Master Format, section 00300 is information available to bidders, which includes preliminary schedules, geotechnical data, existing conditions documentation, environmental assessments, owner financial data, and permit applications. In Corps specifications, section 00830, Attachments includes the above items, and frequently includes wage rates and material sources. The Master Format does not specifically mention graphical presentation of product specifications (such as riprap gradations), or reporting forms specific to tests or QC actions required under a particular section. The CSI Page Format states: "Schedules, Forms and tables may be incorporated within specifications sections." Thus, the issue does not seem to be resolved.

e. Steve responded to a question regarding multiple amendments on a section, i.e. a single page is change several times. He recommends only highlighting to show changes of the current amendment. Some agencies prefer reissuing new pages and others whole new sections frequently, instead of issuing notices of changes. Some Districts (such as Seattle District) incorporate the amendments into a contract specification (which is furnished to the Contractor at award) and other Districts (such as St. Paul District) do not. SI supports all above preferences.

f. There was mention of problems with advertising classified jobs on EBS.

g. There was a brief discussion regarding SpecsIntact submittal register compatibility with RMS.

4. SUBMITTALS AND SI SOFTWARE

a. There was a somewhat lengthy discussion on submittals. Most of the items had been identified previously. MVD had issued a policy letter on submittals recently. The policy letter had been routed to the CSSC members, but otherwise stayed in the MVD. The policy letter did not present very much new information, but was meant to re-open discussion for careful consideration of submittal issues within the districts. One of the primary issues is the number of government-approved and for-information-only submittals. Doug Crum mentioned that contrasting considerations for submittal classification remain because the review time of submittal is linked to the classification. Thus, although classification of most submittals is obvious, classification of some submittals is subjective.

Follow Up Note: There is an issue resolution committee assigned to the submittals issue, through partnering with the AGC. The issue resolution committee will meet the 2nd

week in February and the AGC meeting is the 3rd week in February. Jim Ditto at MVD is the lead on the issue resolution committee.

- b. John Kerkowski indicated that some Districts subcontract AE firms to review GA submittals when they have a backlog. This leads to funding issues for the AE contracts. If funding is not provided, then the GA submittals cannot be adequately reviewed.

5. MASTERSPEC.

Jim Quinn presented an information paper on MasterSpec. The paper will be sent out to Divisions and the Districts for feedback. Jim thinks it should stay in the Corps for now. Freddie will add a note that no action is being taken on recommendations yet, but feedback is encouraged.

6. VIRTUAL INFORMATION LIBRARY (Rick Danke):

- a. Construction Criteria Base(CCB). NIBS is proposing to discontinue issuing the CD-ROM version of CCB and providing Internet access only through the Whole Building Design Guide. The proposed CCB license for the Corps is \$500,000 paid over a 5 year period, but this does not include industry standards, which would be pay-per-view. Current CCB license expires fall of 2001.
- b. There was a discussion of problems relating to updating criteria. There is concern that criteria updates during design with an AE or DB contractors could lead to claims related to change in scope, but no cases were identified.
- c. Rick said that NIBS would maintain the CD version if the Corps had a strong interest in it. Freddie reviewed notes from a district query in July 1999, which had the following responses:
 - 25 responses with average cost of \$55K.
 - 13 wanted vendor CD only product.
 - 20 indicated Internet only use preferred.
 - 11 wanted both CD and Internet.
 - 20 do military, 31 CW.
 - 31 total wanted Internet.
- d. Rick thinks HQ does not want to take money out of operating costs, and criteria people don't want to support it[SPF3]. So Districts may have to support it themselves. Dwight suggested cost be put in army budget. [SPF5]
- e. The Corps share of the CCB license agreement is slightly less than \$500,000. If the cost were distributed to 50 districts, divisions, labs, etc. over a 5 year period, the rough costs are:

<u>YEAR</u>	<u>COE</u>	<u>EACH DISTRICT</u>
1	200K	4000
2	150K	3000
3	100K	2000
4	50K	1000
<u>5</u>	<u>0</u>	<u>0</u>
TOTAL	500K	10,000

f. NIBS is negotiating with Information Handling Services. The CCB information will be put in E&C Newsletters. There currently is a basic subscription cost of \$350 each, and this may be more economical for the Districts. There may be different package options announced later.

g. If the CD for CCB is discontinued, then SI users will need to periodically download the guide specs from the TechInfo site.

7. SI USERS GROUP (Steve Freitas):

Concept was to have group of 8 to 10 power users to meet regularly, probably once a year face to face. A chat room could be started too. Soliciting volunteers has not yet been done. There has been no funding for this yet. Rick Danke questioned if the users group is a duplication of the Indyne help desk. Freddie said the thinking was to have some forum for input to Indyne. Looking at \$15k for initial meeting. Freddie will consider scheduling the users group meeting immediately before or after a Specifications Conference as a Workshop. Steve will send e-mail requesting nominations from each MSC for this Users Group.

8. UNIFIED DESIGN GUIDANCE (Rick Danke):

a. Work to combine guide specifications has started this FY01. Representation is limited to 2 people from each service. Rick Danke and Jim Quinn represent the Army. The group met in Aug 00, next meeting is 19-20 Dec 00. Meeting on 19-20 Dec will resolve where this is going regarding re-labeling CEGS as UFGS.

b. How sections are combined is up to the working groups. They may range from choosing one service GS and adopting it for the UFGS, to combining specifications line by line. There will be 3 databases to start with: similar sets of Army CEGS and Navy NFGS, and a set of sections that are Unique.

c. Jim Quinn will send out a message on E-mail forewarning people to look for UFGS coming soon. The UFGS may be implemented 29 December 2000. It is recognized that users may be surprised by changes.

d. A major conflict occurs between the CEGS specifications and the NFGS specifications in divisions 15 and 16. The CEGS are organized by systems, and the NFGS are organized by component. This will make merging the Division 15 and 16 specifications difficult.

9. PROPONENTS AND TECHNICAL REPRESENTATIVES.

a. The Corps and the Navy include proponents and technical representatives on the guide specification headers. When the UFGS are combined, each service will be responsible for updating proponents and representatives for their own agency.

b. Rick would like to get the paper copy Form 3078 rescinded, because the tracking process for electronic submittals is better.

c. Dr. Checks has lessons learned feature. Form 3078 substitutes. Ideally, corporate people would like to put a lessons learned button on all software.

d. Rick Danke does not want specification comments to go to technical representatives because they are not funded. The proponents are funded to handle routine comments on specifications.

10. COMBINING CW AND MP GUIDE SPECS:

a. The working groups on Unified Design Guidance agreed that any work developing or updating guide specifications this year would result in a UFGS. If a Corps proponent merges CEGS's, then they should be coordinating with their working group for merging to UFGS so that work is not subsequently lost in merging interagency specs.

b. Funding was provided this FY to combine 03300 and 03301. The group is looking at need to keep 03307, concrete for minor structures. One option would be to include tailoring tags in 03300 for minor structures and delete 03307. The CSSC group consensus was that 03300, 03301 and 03307 should be kept as separate guide specifications.

c. They will likely merge 03150 and 03151 on expansion/contraction joints and waterstops.

d. For some reason, concrete formwork is not on list for merging specifications from different agencies.

e. There is no funding for piling.

f. Proponent for elevators wants to combine 3 sections into 2.

g. The CSSC, at this time, is not prepared to address the NFGS district or division masters, in spite of their presence on CCB.

11. JOINT ER ON PLANS AND SPECS:

a. Draft of MIL STD 3007 will be out in January. MIL STD's are on ASSIST. The Navy maintains MIL STD's on the [NAVFAC Engineering Innovation and Criteria Office \(Code EICO\)](#).

Follow Up Note: [MIL STD 3007](#) is listed on the TechInfo site, under Tri-Service Unified Facilities Criteria, but is not yet posted.

- b. Rick stated that some of the material in the MIL STD 3007 needs to be added to the Plans and Specs ER.
- c. The Navy is still issuing all construction contracts in metric. They know the contractors get it, pay someone to convert it all to English, then they build it, then they pay someone to convert the asbuilts all back to metric and submit them to us.
Policy on Asbuilt drawings was given in letter recently.
- d. S-O-W will cover only the P&S. Mr. Rush will provide CSSC members copy of draft S-O-W for review and to send to Districts for volunteers to rewrite joint ER.

12. CSI/SAME COMPETITION

- a. CSI is ready to implement a specifications award program for government procurement, but the Corps has not identified a funding mechanism. Steve suggested asking for funding from the Outreach program for promoting the Corps, but Joe Miller stated that was outside scope of the outreach program. Outreach needs a return on investment, more for informing customers of Corps programs.
- b. CSI used to require CSI membership for participation, but Freddie understood this would not be required for the Government competition. Using CSI as a cosponsor would be beneficial to AE participation.
- c. Ray presented the award to be for agencies, others interpreted it as an individual award. Freddie will verify.
- d. SAME (National HQ) has not responded for this competition and if they are not interested in participating, possibly another organization such as ACEC would be interested. Recommend this be mentioned at the next ACEC meeting (National).

13. DESIGN BUILD GUIDE SPECIFICATIONS

- a. There is no interest in trying to maintain a separate set of GS for DB.
- b. Freddie is still hearing that CSI is having problems marketing Perspective. It is not likely it will be maintained. Navy had 3 divisions test Perspective. 2 divisions expressed dissatisfaction and discontinued it. SW division is still using it. Anil stated Seattle District's experience in working with Perspective was that it was cumbersome, having many of the same problems associated with using commercial specifications such as MasterSpec.
- c. Unifomat for drawing page layout is being considered for adopting for DOD work. Freddie will extend an invitation to some DB experts for next meeting.
- d. Norfolk District has extensive experience with housing, and DB related to that. Norfolk has proposal for DB guidance.
- e. The level of design completed at start of DB contract varies. DB advocates want to minimize owner design detail prior to issuing DB contract, and maximize reliance on performance specifications.
- f. Some problems have been noted with customer requirements for DB projects. Some believe DB contracts can be modified easily, and therefore do not seriously consider all requirements upfront. Others have submitted extensive work on editing specifications, which are not DB orientated.

g. CSSC involvement was questioned by Larry Seals with Joe Miller respondeing that the main idea is for the customer to get his/her requirements into the RFP. Freddie Rush will send message to HQ DB Proponent (Mark Grammer) on CSSC involvement.

14. MISCELLANEOUS

a. Hammer Award was declined.

b. Funding for technical conferences for Structural, Geotechnical, Electrical/Mechanical, Specifications, and Cost Engineering are planned for 2001 and 2004. Considering 1 or 2 day conference. Agenda items include CCB changes, gabion study, SI Version 3, and users group. Freddie suggested querying districts to estimate participation. CSI convention is 21 - 24 June 2001 in Dallas, TX. This is relatively soon after last workshop, but a long time before next opportunity in 2004. Freddie will look for CSI representative to attend. The next CSSC meeting was tentatively set for 19 - 20 June 2001 at Dallas, TX.

8 DECEMBER 2000

15. REVIEW OF YESTERDAY:

- a. Jim will send Freddie a master spec on design build
- b. Steve Freitas will teach MS Word routing to CSSC members requesting assistance.
- c. Freddie will notify Districts that the current CCB contract with NIBS is expiring. The fee is set and unlikely to change. Dwight has not finalized determination of what we what to do. Notify districts of the 4-3-2-1 cost split.
- d. Freddie will send E-mail out to Districts regarding specifications workshop.

16. REFERENCES:

- a. NIBS is negotiating with Information Handling Services to try and get more reference standards available through CCB. Tom Andre said they pay \$5000/year for Information Handling Services contract with limited subscription to ASTM and a small number to others unlimited, and anything else is pay per view.
- b. Someone questioned criteria discouraging using Corps references? Quinn said the FAR says if you reference a government standard, you must supply the standard. If you reference an industry standard, you must tell him where to get it. Quinn said they discourage using Corps standards in GS, but it is not an absolute. He thinks the issue got out of proportion.

17. JOHN KERKOWSKI RE. SUMMARY OF POWER POLES ISSUE:

Spec was not a problem for the copper naphthenate preservative the problem was a faulty preservative. There is a professor at Syracuse NY representing at least 3 entities on this issue. His conclusion is that where problems have occurred, the poles were not properly dried, and/or the preservative had water in it. There is litigation up to \$400 million regarding premature failure of these poles. The problem is occurring throughout the country. If the preservative were properly applied, there would not be a problem.

18. STATUS OF CEGS

- a. Tom Andre re. Rock and Soil Anchors: Planning to send out approval copy this month. There are about 12 comments to be resolved yet. They have about \$20k left over in budget, which may be returned.
- b. Tom Andre re. Concrete Rehab spec: They got 35 sample specifications in response to their shotgun mail requesting input. First draft will likely be this spring. They have \$15k, and another \$60k is scheduled.
- c. Query to Districts showed interest in update of roller compacted concrete 03378. This is in progress. \$25k appropriated.
- d. Don Carmen will be working on Dredging Spec. He has several existing specifications to merge, one is the NFGS. Rick will suggest a draft be distributed for comments. \$15k is planned for this effort, but not yet furnished.
- e. ACB revetments. Freddie has \$15 set aside for this, but it expires in September. Doug gave update on ASTM standards. The design guide is postponed indefinitely. The installation, manufacture, and testing are currently balloted at subcommittee. Installation is expected to encounter comments. If testing and manufacture pass, then the framework would be in place for a guide specification. A 90% draft could be completed this FY, but need 2K for FY02 for finalizing.
- f. Composite piles. New Orleans is planning a lock. A manufacturer proposed use of composite piles, which some of the designers rejected since the products are new and their reliability is uncertain. The dispute regarding use of unproven products escalated to the state senator. There is a test program planned.

19. JOHN KERKOWSKI RE. REGISTRY OF SKILLS (ROS) AND REGISTRY OF CONSULTANTS (ROC).

Originally the ROC was initiated. Gen Ballard postponed the ROC and shifted to the ROS, which is now operational. 1600 to 1800 people have registered in the ROS. ROS should help to locate people that have expertise, which might become increasingly useful due to plans for reducing centers of expertise. Human resources also has interest in ROS. ROC may be resurrected. The beta test for the ROC is done, and the cost to bring operational is nil. Ray Navidi is proponent.

ENCLOSURES

1. Meeting Attendance
2. Agenda
3. MasterSpec report (an evaluation of possible use)

HANDOUTS

1. MIL STD 3007 UFGS Appendix
2. UFGS Working Groups
3. SpecsIntact Beta 3 Examples
4. Gabion Study Report

CORPS SPECIFICATIONS STEERING COMMITTEE
MEETING ATTENDANCE
Washington, D. C.
7 - 8 December 2000

<u>Name</u>	<u>Organization</u>	<u>Phone</u>
Freddie Rush	MVD	601-634-5936
Hon-Ping Chee, (Bingo)	POD	808-438-6965
Anil Nisargand	NWS	206-764-3828
Joe Miller	NWD	402-697-2649
Jim Quinn	HNC	205-895-1821
Rick Dahnke	CECW	202-761-4125
Doug Crum	MVP	651-290-5645
Tom Andre	LRP	412-395-7306
Carl Kersten	NAVFAC	
Larry Seals	LRD	513-684-3034
Johnny Baggette	SAD	404-562-5112
Steven P. Freitas	SPK	916-557-7296
John Kerkowski	NAD	718-491-8737
David Barber	SWD	214-767-2385

**AGENDA
CORPS SPECIFICATIONS STEERING COMMITTEE**

THURSDAY, 7 DECEMBER 2000

0800 - 0805	Announcements	Rush
0805 - 0810	Introduction of New Members	Rush
0810 - 0815	Review Agenda	Rush
0815 - 0825	HQUSACE Update	Baldi/Dahnke
0825 - 0830	Review and Approve Minutes of Previous Meeting	CSSC
0830 - 0845	Navy/NASA/Corps Partnering	CSSC/Navy/NASA
0845 - 0930	SICCCB Update/Amendments	Freitas/Quinn
0930 - 0945	Break	
0945 - 1015	Submittals & SI Software	CSSC
1015 - 1030	Virtual Information Library	Dahnke
1030 - 1100	SI Users Group	Freitas
1100 - 1130	UFGS Update	Dahnke
1130 - 1245	Lunch	
1300 - 1330	Tech Reps for CW CEGS	CSSC
1330 - 1415	Combining CW & MP CEGS	CSSC
1415 - 1430	Funding	Dahnke
1430 - 1445	Break	
1445 - 1530	Joint ER on Plans & Specs	CSSC
1530 - 1545	Submittal Register/RMS	CSSC
1545 - 1600	CSI/SAME Competition	Rush
1600 - 1615	Proponents/Tech Reps Update	CSSC
1615 - 1630	CSI Convention/Next Meeting	CSSC
1630 - 1700	Design Build GS	CSSC

FRIDAY, 8 DECEMBER 2000

0800 - 0915	New Issues	CSSC
0915 - 0945	Status of CEGS (CW)	
	Rock & Soil Anchors GS	Andre
	Fracture Critical Members	Rush
	Concrete Restoration GS	Andre
	Gabion Study	Kerkowski
0945 - 1000	Break	
1000 - 1030	New/Update CEGS	CSSC
	Roller Compacted Concrete	
	Dredging	
	CEGS 03301/03700/03701	
	ACB Revetment	
1030 - 1130	Open Discussion	CSSC
1130 - 1200	Summary and Recap	CSSC

MASTERSPEC **(an evaluation for possible use)**

1. BACKGROUND:

MASTERSPEC is a private industry developed system of guide specifications for construction. The system is a product of the American Institute of Architects (AIA) and is published by ARCOM Master Systems of Salt Lake City, Utah. MASTERSPEC has been in existence for over 30 years, includes approximately 500 specification sections, and is reported to have about 10,000 users. The system is usable with two off-the-shelf word processing programs (MicroSoft Word and Corel WordPerfect). Users of MASTERSPEC also have access to LINX and MASTERWORKS software which can be used to facilitate editing and for job processing.

Occasionally USACE and NAVFAC customers require that MASTERSPEC specification sections be used in the design of their projects. Also, questions arise periodically as to the suitability of commercial specifications for military construction. In order to get a closer look at the current version of MASTERSPEC, the July 2000 meeting of the SPECSINTACT Board included a presentation by three people from ARCOM.

Following the presentation ARCOM suggested several possibilities for use of MASTERSPEC by Government agencies:

1. Use MASTERSPEC software with agency text. This requires that agency text be adjusted to the MASTERSPEC format.
2. Use MASTERSPEC text for sections that are not Government specific.
 - a. This would include sections such as doors, windows, and gypsum wallboard which are the same for industry and Government.
 - b. This would also include sections which do not exist in agency guide specifications.
3. Use MASTERSPEC text by modifying to meet Government requirements.

2. TEXT REVIEW:

This review is based on several MASTERSPEC specification sections provided by ARCOM as being representative of the system. These sections were reviewed against the CEGS guide specifications of USACE since the CEGS specifications are quite similar to those of NAVFAC and NASA. For purposes of this report CEGS guide specifications are referred to hereafter as AGENCY guide specifications.

2.1 Subjects Covered: The 500 plus or minus sections in MASTERSPEC are divided into three versions: Basic, Supplemental, and Short Form. Often the same subject is included in more than one version, which means that there are far fewer than 500 separate topics included in the MASTERSPEC system. In comparing the MASTERSPEC sections to the 417 sections in the master system of USACE, it would normally take several MASTERSPEC sections to cover the work included in a single AGENCY section. For example it would take 29 MASTERSPEC sections to cover the subjects included in the USACE section 15895 AIR SUPPLY, DISTRIBUTION, VENTILATION, AND EXHAUST SYSTEMS. Indications are that MASTERSPEC does not cover at least 50% of the subjects covered by the USACE master system. There are a few MASTERSPEC sections which cover subjects not included in the AGENCY systems – for example stone toilet compartments and stage curtains.

2.2 Section Structure:

A. MASTERSPEC: Each MASTERSPEC section in their main library system consists of the following elements :

Cover: Includes title, date, description of the section, and summary of changes.

Evaluations: Includes general editing instructions, information regarding products involved, listing of applicable reference standards, and listing of manufacturers whose products may comply with the specification requirements.

Guide Specification: Guide specification text and notes to be used in preparing a project specification section.

Drawing Coordination Checklist: Includes notes regarding information which should be shown on the project drawings.

Specification Coordination Checklist: Includes notes regarding coordination with other sections of the project specifications.

Indications are that elements of a MASTERSPEC section, other than the Guide Specification element, total as many pages as the Guide Specification element.

B. AGENCY: The AGENCY guide specifications include only the text and notes to be used in preparing a project specification section. When considered necessary, information that MASTERSPEC includes in the Cover, Evaluations, Drawing Coordination Checklist, and Specifications Checklist are included in the AGENCY notes or in criteria documents such as Technical Manuals. The Guide Specification element of a MASTERSPEC section is the only element that might provide any real benefit to the Government.

2.3 Guide Specification Characteristics:

A. MASTERSPEC: Each MASTERSPEC section has the following characteristics:

Part Designations: Three parts (General, Products, Execution) as established by CSI.

Paragraph Designations: The following is an example of how the first paragraph of Part One could be set up (Note: Often there will be an “A” designation without a “B” designation):

- 1.01
- A.
- 1.
- a.
- 1)

Paragraph Titles: Main paragraphs RELATED DOCUMENTS (which includes reference to other parts of the contract) and SUMMARY (which includes a section scope statement and a listing of related sections) are used in all sections.

Language Style: Imperative mood (apply materials) is used; Indicative mood (materials shall be applied) is seldom used. The general appearance is that of outline form throughout.

Reference Publications: Reference publications used in the text are not listed in the section along with their dates of issue.

Submittals: Extensive submittal requirements (e.g. samples for selection and samples for verification) are used.

Execution: Product installation requirements are very brief.

Proprietary Products: A listing of product manufacturers is included. Citation of a manufacturer’s product are generally qualified by “subject to compliance with requirements”.

Updating Cycle: Updated is performed at approximately 2 to 5 year intervals.

B. AGENCY: The AGENCY guide specification sections and MASTERSPEC guide specification sections differ greatly in content and philosophy. Both use the CSI three-part section format and generally follow the CSI section format outline; however, from that point the differences become very pronounced.

Part Designations: Although AGENCY and MASTERSPEC both use the same three part designations, there is great differences in content. AGENCY includes many requirements in Part One that are unique to the Corps of Engineers methods of operation and operating environment. Part Two probably includes requirements that are the most

common between the two systems, simply because the products and standards specified in this part are mostly the same throughout the industry. However, naming of manufacturers in Part Two of a AGENCY would almost never be necessary or desirable. The AGENCY approach used in Part Three is much more detailed than used in MASTERSPEC in order to assure quality work and to benefit from lessons learned on previous projects.

Paragraph Designations: AGENCY use a number-decimal system (1.1.1.1 for the fourth level in Part One) whereas MASTERSPEC uses an alpha-numerical system (1.01.A ,l, a, for the fourth level in Part One).The CSI document *Page Format* acknowledges both systems as convenient methods for referring to specific paragraphs in a section. MASTERSPEC has the capability to automatically change from the alpha-numerical system to the number-decimal system. The number-decimal system works best for documents, such as AGENCY with long paragraphs and many pages.

Paragraph Titles: AGENCY never use main paragraphs RELATED DOCUMENTS and SUMMARY because of the redundancy created by their use.

Language Style: AGENCY use the imperative mood (apply materials) very sparingly because it has the implied subject of “you” which could be misinterpreted, and that language style differs for the indicative mood used in other parts of the contract documents.

Reference Publications: Regulations (FAR Paragraph 11.201) require that reference publications used in procurements be identified by title and date and that the source of non-Government publications be provided.

Submittals: Submittals add considerable cost to the work, and wording in AGENCY cautions the designer to use them sparingly. When used in AGENCY, submittals are classified in accordance with standardized terminology. The handling of submittals in AGENCY has been set up to be compatible with **SpecsIntact** and with the software used by field personnel in administering the contract.

Execution: AGENCY have rather extensive requirements for installation of products and conducting the other work. on the job. This has been found necessary to benefit from lessons learned through past experience and to aid in contract administration.

Updating Cycle: AGENCY are updated at approximately 4 to 5 year intervals; however reference publications and significant technical changes are made as necessary through the Agency programs.

3. SOFTWARE:

A. SPECWARE: In addition to the commercial off-the-shelf word processing software (MicroSoft Word and Correl WordPerfect) used to edit MASTERSPEC specifications,

ARCOM also has **SPECWARE** that can be used to edit MASTERSPEC Sections. **SPECWARE** consists of two software programs. One of the programs is **LINX** and the other software program is **MASTERWORKS**.

The **LINX** software is a stand-alone automated editor for MASTERSPEC Specifications that accesses an ASCII Structured Text database. The text elements in each specification are linked together hierarchically and semantically. The software provides the capability to do preliminary editing through a question and answer process. After the questions are completed the specification is stored in the word processor (MS Word or Word Perfect) being used.

The **MASTERWORKS** software is a “plug-in” into various versions of MS Word. **MASTERWORKS**, provides the capability to perform section or project functions including spell checking, custom headers and footers, searching and replacing of text strings, choice of English or Metric measurement units, and generation of reports such as for submittals.

The ARCOM software (**LINX** and **MASTERWORKS**) is not interactive with specifications on a CD-ROM. The specifications on a CD-ROM would have to be downloaded to a personal computer and the “read-only” file attributes would have to be changed on the files to permit writing to the files. Also, there is very limited document management capability, those functions which enable job processing and quality control, built into either program.

The software does not have the capability to toggle printing of notes to print without notes or print with notes. In order to print the specifications with the notes, changes to several settings in MS Word are required. The notes in the specifications are included in section text and can be selected to view the specification with or without notes.

Editing of a specification requires a person very proficient with the MS Word capabilities. When a new specification is created or text is inserted into an existing specification, the person must pay attention to the MS Word styles, paragraphs, and other text elements so the section retains its integrity. The **MASTERWORK** menu options do offer tool bars to perform automatic functions of deleting text, inserting text in bracket options, etc. However, the tool bars are not anchored and are very cumbersome to use while editing the specification.

B. SpecsIntact: The **SpecsIntact** software is designed to work with the AGENCY guide specifications, and to serve Designers and A/E firms in the production of master specifications and projects for the Corp of Engineers, NAVFAC and NASA. **SpecsIntact** is a very powerful document management system, has a self-contained word processor, and includes many reporting and quality control features not found in the **MASTERWORKS** and **LINX** software. **SpecsIntact** was developed specifically to meet agency needs in the production of project specifications, and the software is continually adjusted to incorporate state-of-the-art technology and to meet changing agency needs.

4. RESPONSE TO ARCOM SUGGESTIONS:

A. MASTERSPEC Software with Agency Text: In order to use MASTERSPEC software with agency text, the agency text would have to undergo a conversion process. As part of that operation the agency text would have to be adjusted to work with **LINX** and **MASTERWORKS** software. This would be very expensive, would produce no improvement in agency specifications, would still require agencies to maintain their guide specifications, and would preclude use of **SpecsIntact** software which has been developed specifically to meet agency needs. **SpecsIntact** is serving the agency needs very well and includes many functions not included in the MASTERSPEC software.

B. MASTERSPEC Text for Sections that are not Government Specific: Response to the two parts of this suggestion is as follows:

- a. While it is true that sections such as doors, windows, and gypsum wallboard have product requirements that are well established in the industry, the commonality ends when agency requirements for Part One and Part Two are considered. However, there are times when a full blown agency specification may not be needed and a MASTERSPEC section may provide adequate coverage for the work if the designer is willing to take the risk to use a less comprehensive specification or willing to invest additional effort to adjust the specification to meet agency requirements.
- b. The alternative of using MASTERSPEC text for sections which do not exist in agency guide specifications has some potential. Here again, the designer would have to be willing to take the risk of using a specification with rather abbreviated requirements or be willing to invest additional effort to adjust the specification to meet agency requirements.

C. Modify MASTERSPEC Text to Meet Government Requirements: Modification of MASTERSPEC text to meet Government requirements is not considered a viable option since the differences between the MASTERSPEC text and the agency text are so great and the agency text fully meets regulatory requirements..

5. CONSIDERATIONS:

The MASTERSPEC customer base and long presence in the marketplace is proof that the system works for many projects. The same can be said for AGENCY guide specifications which have been specifically developed to meet the needs of construction procurement for the Federal Government. One of the main differences between MASTERSPEC guide specifications and AGENCY guide specifications is the regulatory controls applicable to Government procurement and construction which are not given full consideration in the MASTERSPEC sections. Another difference is the need for agency guide specifications to include safeguards to protect the Government from the “low

bidder”. The agency guide specifications are the products of many years experience and reflect lessons learned through use on Government projects.

However, there are situations where use of MASTERSPEC guide specifications is required by a customer or where use of one or more MASTERSPEC sections in a project would be beneficial. Use of MASTERSPEC would be greatly facilitated for USACE, NAVFAC, and NASA projects if the MASTERSPEC sections were in the **SpecsIntact** format. The **SpecsIntact** Team has developed a prototype program to convert MASTERSPEC sections to the **SpecsIntact** format, and this conversion preserves all MASTERSPEC text there are some limitations in the use of the converted text. Limitations include:

1. The MASTERSPEC Supporting Documents would not be converted to **SpecsIntact** format, but this does not distract for the use of the specification sections.
2. Although all MASTERSPEC text would be included in the conversion, there would be some paragraphs that may show as text or lists, but this would not affect the usefulness of the text.
3. The following **SpecsIntact** functions would not be operational because of the absence of compatible text in MASTERSPEC: Reference Reconciliation; Submittal Register generation; and several editorial functions which depend upon a specific text format. However, functions such as creating a Project Table of Contents, creating a Section Table of Contents, and viewing or printing of a section with or without notes would still be available.
4. Inclusion of MASTERSPEC sections in combination with AGENCY sections in a project would result in quality control reports that did not include the MASTERSPEC sections.
5. Since the copyrighted MASTERSPEC section has been changed by the conversion, the header would be revised to indicate that the section is based on the copyrighted version of MASTERSPEC text. Also, a standard note would be added to identify some of the **SpecsIntact** functions that are not available when using the converted document. However, the three part section format would be retained, paragraphs would have the number decimal form, and choice between English and Metric units would be retained. If the MASTERSPEC guide specifications are used in combination with the Agency guide specifications for a project specification the quality assurance for the completed project specifications would not be complete.

Given that MASTERSPEC sections are currently used in specifying some agency projects, nothing has been lost from the MASTERSPEC text and significant gains in job

processing and quality control are possible in using converted MASTERSPEC sections with the **SpecsIntact** software.

6. **RECOMMENDATIONS:** It is recommended that:

A. The use of MASTERSPEC sections in **SpecsIntact** format be encouraged in those situations where MASTERSPEC sections will be used in an agency project.

B. Negotiations be held with ARCOM regarding the distribution by ARCOM of MASTERSPEC sections in **SpecsIntact** format.

Respectively Submitted by the MASTERSPEC Review Committee:

Patricia Robinson
SPECSINTACT Team Leader
NASA Representative

James A. Quinn, P.E.
Senior Civil Engineer
USACE Representative

Carl Kersten, R.A.
Architect
NAVFAC Representative