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## Computerizing the uniform CPA examination -- Issues, Strategies, and policies: an Update, March 5, 2001; Briefing paper no. 2

Joint AICPA/NASBA Computerization Implementation Committee

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**Briefing Paper No. 2**

**Computerizing the Uniform CPA  
Examination—  
Issues, Strategies, and Policies:  
An Update**

**March 5, 2001**

Prepared by the Joint AICPA/NASBA  
Computerization Implementation Committee

Comments should be received by July 1, 2001, and addressed to:  
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## EXECUTIVE SUMMARY

The Joint AICPA/NASBA Computerization Implementation Committee (CIC) is charged with managing the transition of the Uniform CPA Examination from a paper-based test to a computer-based test. The CIC has thoroughly discussed and evaluated many critical issues surrounding this project and through this Briefing Paper is presenting its recommendations to State Boards of Accountancy and other interested parties for comments and suggestions. The CIC will consider all the feedback received, adjust the process and procedures of computerizing the examination accordingly, and submit final recommendations to the Board of Examiners. In addition, the CIC will issue a summary document highlighting the findings and revised strategies.

This Briefing Paper contains the following recommendations:

- In order for the Uniform CPA Examination to continue to protect the public interest and to maintain the confidence of its various constituencies, it should provide a comprehensive assessment of the entry-level knowledge and skills required by CPAs in a changing business and financial environment. Revising and computerizing the Uniform CPA Examination is the most efficient and cost-effective way to accomplish these goals.
- The computerized Uniform CPA Examination should be offered frequently throughout the year, with a goal of continuous testing. However, at the expected launch date of November 2003, the test is likely to be offered in four three-month windows and that, within each three-month window, the test will be offered for two months.
- The computerized examination should have four sections: Auditing & Attestation; Financial Accounting & Reporting; Regulation; and Business Environment & Concepts.
- The examination should test *both* knowledge and skills that have been identified by the practice analysis to be necessary at the entry level. Those skills include communication, research, analysis and organization, and judgment. To that end, the examination should include objective-format questions and constructed response questions such as simulations.
- The current four sections of the Uniform CPA Examination should be considered equivalent to the new four sections of the examination for purposes of transitioning candidates who have conditioned by the 2003 launch date.
- First-time test-takers should take all four sections within thirty days. For security reasons, candidates should be allowed to test only once in a three-month window. The policies covering retakes will be discussed by the CIC and a recommendation provided to the boards at a later date.
- The CIC has not completed its work on conditioning; therefore, final recommendations have not been made. However, the CIC is recommending, at this time, that a candidate be required to pass all four sections within a two-year time period.
- The Content Oversight Task Force (COTF) has not completed its work on the length of the examination. The COTF's recommendation will balance the length of time sufficient for the scores to be psychometrically reliable and valid, the defensibility of the scores to the public, and the costs to the candidates. At this point, the COTF believes that each of the four sections may differ in length and expects the computer-based test to take less time than the current examination. Total testing time for the computer-based examination may range from ten to fourteen hours. The COTF expects to provide final testing time recommendations during the fourth quarter of 2001.
- The CIC firmly believes computer-based testing is the most cost-effective approach for meeting the examination's public protection requirements. However, it acknowledges that computer-based testing results in an examination that is more expensive than the current paper-based test but less expensive than a paper-based examination that tests all the skills identified by the practice analysis. The CIC is committed to continuing to investigate approaches for containing costs.
- The delivery of the computerized Uniform CPA Examination will include state-of-the-art software and physical security measures appropriate to this high-stakes examination. Many of the specific measures will be developed as the project matures.

State boards of accountancy are responsible for ensuring that individuals with the appropriate knowledge and skills are granted CPA licenses or certificates. This revised, more relevant examination provides state boards with the appropriate information to make that decision. The proposed computer-based testing process will not change the state boards statutory responsibilities.

The CIC acknowledges that a good deal of discussion and controversy surrounds the concept of a “national database.” The CIC has discussed this issue but has not finalized its recommendation. Once it has done so, it will communicate its proposed solution to state boards of accountancy and other interested parties.

The rationale supporting each of these recommendations is included in this Briefing Paper along with a comprehensive narrative description of how the testing process may flow.

## INTRODUCTION

The Uniform CPA Examination is one of the world's leading high-stakes licensing examinations. Its purpose is to admit individuals into the profession only after they have demonstrated entry-level knowledge and skills necessary to protect the public interest in a rapidly changing business and financial environment. In order to continue to meet its mission, the examination has, from time to time, undergone revision and change. These modifications have, in recent years, included changes in structure and content, nondisclosure of test items, multiple forms of the test, and equating.

Once again, it is time to revise the examination to ensure that it continues to meet its public protection mandate by reflecting the changes in work performed by entry-level CPAs, by acknowledging the need for higher-order skills, and by recognizing the increasingly integral role of technology in the work of entry-level CPAs. Paper-based tests are limited in their ability to test higher-level (such as research) and information technology skills. Further, the more closely an examination reflects the current real-world environment, the more effective the test is in protecting the public interest. In order to create a testing experience that more closely emulates this real-world environment, the revised examination has been targeted for delivery via computer.

This Briefing Paper describes the critical need to change the content of the examination and the strategies and policies for converting the Uniform CPA Examination to a computer-based test. It outlines the efforts undertaken by the Joint AICPA/NASBA Computerization Implementation Committee (CIC) to date, the major components of the project and their status, and additional areas that need to be addressed and resolved before the expected launch date of November 2003. (Appendix A includes frequently asked questions and related responses.)

The Briefing Paper also seeks input on recommended policies, procedures, and strategies, as well as on issues yet to be resolved. It is through this critical feedback that the revised Uniform CPA Examination will reflect the input of the entire accounting community to help it meet its mission.

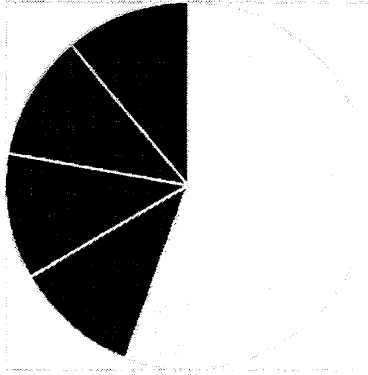
### ***Value Proposition for the Revised Uniform CPA Examination***

In order for the Uniform CPA Examination to continue to protect the public interest and maintain the confidence of its various constituencies, it should provide a comprehensive assessment of the entry-level knowledge and skills required of CPAs.

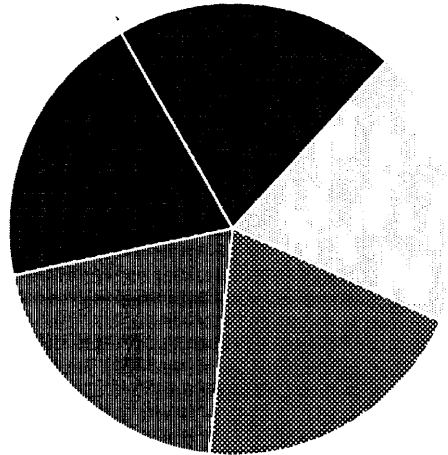
The following two charts illustrate the changes in the knowledge and skills required of entry-level CPAs over the past several decades. Chart I reflects the requirements of entry-level practice in the past. Chart II depicts the current requirements of entry-level practice, and the direction it is heading and will likely continue heading in years to come.

**Exhibit 1: Knowledge and Skills Required of Entry-Level CPAs**

**Chart I: Past**



**Chart II: Future**



**Legend**

Dots—Professional knowledge	Horizontal Lines—Technological skills
Checkers—Communications skills	Dashes—Research skills
Vertical Lines—Analysis and organization	

Although illustrative rather than literal, the two charts point out significant changes in the knowledge and skills required of entry-level CPAs, changes that were reflected in the recently conducted practice analyses and in ongoing observations of the profession at the entry level.

- Chart II is larger than chart I because it depicts the increase in the entire body of knowledge and skills required of CPAs. The requirements of the profession have expanded tremendously over the years, as witnessed by the increase in the number of professional standards and regulatory requirements, and the complexity of business and related transactions and events.
- Greater competence in each of the areas is required to protect the public interest.
- Professional knowledge, which was a particularly significant requirement of entry-level practice in the past (chart I), represents a relatively smaller--but equally important--portion of the entire knowledge and skill set required of CPAs today (chart II).
- Technology, research, and communication skills, as well as the ability to analyze and organize information, and apply judgment, have become integral to the work of CPAs today. Thus, they have become relatively larger requirements for entry-level CPAs (chart II).

The Uniform CPA Examination is accepted as an essential means of protecting the public. Because of this recognition, members of the profession and its regulators continue to look to the CPA Examination as an important means of assessing candidates' entry-level knowledge and skills. The examination's recent practice analysis demonstrates that knowledge of professional standards and the business environment will continue to be important at the entry-level. However, the skills needed to apply that knowledge, including communication, research, analysis and organization, judgment and understanding, have become increasingly critical.



Two decades ago, an entry-level CPA could have intimate knowledge of the body of professional standards—both auditing and accounting. Over the years, Financial Accounting Standards Board Statements of Financial Accounting Standards have proliferated and become more complex. The Emerging Issues Task Force was formed and has issued numerous, detailed pronouncements. Whole bodies of industry-specific auditing and accounting standards have been promulgated and, looming in the not-too-distant future, is the recognition of international auditing and accounting standards.

Consequently, it has become impossible for any one CPA to have intimate knowledge of the entire body of professional standards. Protection of the public now demands that, in addition to professional knowledge, entry-level CPAs possess a variety of skill sets that they can bring to bear in analyzing, organizing, and communicating the vast array of information available to them. For example, an entry-level CPA needs to have analytical skills to look at a situation, and identify the accounting issues and the audit or business risks. Then, the CPA's research skills must come into play to find necessary information. Higher-order skills are also required to apply the results of the research to resolve the issue or mitigate the risk. Finally, an entry-level CPA needs communication skills to construct reports, including financial statement disclosures on a wide range of issues using language that skillfully communicates the information and meaning intended. In addition, entry-level CPAs need to articulate issues and solutions to clients, other CPAs, and regulators. As a result, based on the real world of entry-level accountancy, the skills of communication, research, analysis and organization, and judgment must work hand in hand with professional knowledge to ensure protection of the public and therefore must be tested robustly on the Uniform CPA Examination.

The CIC believes that the Uniform CPA Examination's content and delivery need to change in order to meet the combined requirement of testing knowledge and skills. Paper-based exams work well for testing memorization in areas such as knowledge of professional standards. However, such exams are severely limited in their capability to adequately test skills. For example, to test research skills in a paper-based environment would require the delivery of books containing professional standards and tax regulations to the examination sites. The cost to maintain, deliver, and control those books would be significant—as would be the accompanying security and logistical problems. CBT allows for the use of those standards and regulations online, as well as for the use of many other resource tools such as present-value tables, CPI indexes, and Treasury rate charts. All of these work together to create a robust exam that allows Boards to more effectively assess candidates' skills.

Another significant advantage of computer-based testing is the ability to emulate real-world situations, which in a paper-based examination is limited to problems and essay questions. In a computer-based testing environment, multidimensional simulations and case studies enhance the ability to assess important skills such as research, communications, the ability to integrate knowledge, and organizational and analytical skills. This capability will become a key component of the computer-based test.

### ***The Advantages of a Computerized CPA Examination***

In summary, after careful consideration of the necessary aspects and features of a revised examination, the CIC has concluded that the best mechanism for delivery is a computer-based test (CBT) for the following reasons:

1. CBT offers the optimum approach for testing the skills of communication, research, analysis, organization, understanding, and judgment and allows easy, cost-efficient access to research and other tools and aids.
2. CBT allows the candidate to evaluate real-life case studies through the use of simulations, which can be interactive and which require candidates to demonstrate their knowledge and skills of integration across subject areas.
3. CBT offers candidates and employers flexibility in scheduling the examination time. No longer are candidates and employers tied to two days during the first week of May and November.
4. CBT offers relevant and improved study aids (diagnostic). A critical aspect of any licensure exam is the feedback that the test-taker receives after completing the test. A computer-based test will provide improved relevant feedback to the candidates that will help their understanding of their performance in the underlying subject areas and skills.

5. CBT allows new questions to be added to and deleted from the item bank throughout the year.

In addition, as other major high-stakes licensing examinations move from paper to computer, it is difficult to justify why the Uniform CPA Examination remains in paper form. As corporate America continues to increase its reliance on information technology, all CPAs, including entry-level CPAs, will need to be able to demonstrate technology skills. A computer-based examination is more in concert with this critical skill.

As a result, the CIC firmly believes that a CBT will bring otherwise unavailable advantages to three major constituencies:

- *The public* will be assured of uninterrupted protection through an examination that tests in a more comprehensive way the current entry-level knowledge and skills.
- *Candidates* will be afforded increased examination frequency and greater examination convenience.
- *Regulators* will experience fewer administrative requirements and be able to target resources to other areas.

### ***Invitation to Respond***

With this document, the CIC continues its stated objective of seeking advice and input throughout the transition process. The specific needs of each jurisdiction, the high-stakes nature of the examination itself, and the technical demands of developing a CBT make broad-based involvement throughout the process a requirement for success.

All readers of this document are requested to complete the "Invitation to Respond," which will provide the CIC with important directional information as it moves forward. We especially request official State Board of Accountancy responses. The CIC welcomes your continued advice and support as together we work toward our expected November 2003 launch of a revised, computer-based Uniform CPA Examination that will better serve the public interest.

## COMPUTERIZING THE UNIFORM CPA EXAMINATION: THE TESTING PROCESS

The development and delivery of a computer-based test (CBT) is a many-phased, many-faceted process. *The scenario described in this section is based on the CIC's understanding of the states' testing processes and is still being reviewed and modified.* The CIC would greatly appreciate feedback from readers of this Briefing Paper.

### ***The Delivery Process***

Prometric, Inc. is the recognized leader in the computer-based testing industry. It delivers the premier secure licensure examinations that are offered in a technology-based format, including the U.S. Medical Licensing Examination, the National Council of Architectural Registration Boards, and the National Association of Securities Dealers Regulation, to name a few. In fact, Prometric delivered more than 4.5 million certification, licensure, admission and other high-stakes exams in 2000 alone. Effective with the November 2003 launch, Prometric will deliver the Uniform CPA Examination through its network of secure testing centers. Prometric, with more than 300 high-security sites across the 54 jurisdictions, operates test centers within twenty-five miles of 90 percent of the United States population. (See Appendix B for a listing of states and cities where test centers are currently located).

Through this new delivery process, State Boards of Accountancy determine candidates' eligibility to sit for the examination, are directly involved in the development of policies and procedures for administration and will continue with all their statutory duties that protect the public interest. The AICPA, working with State Boards, is responsible for the delivery of a revised CPA examination through the Prometric network.

Prometric has assigned a team of cross-functional professionals to exclusively manage the delivery of the computer-based Uniform CPA Examination. They will work closely with jurisdictions to meet their specific requirements. Further, Prometric will accommodate various test administration models (see "Fees and Cost Considerations") and will operate within specific, comprehensive quality standards, which will be monitored by the AICPA and NASBA's CPA Examination Review Board.

(Additional information on Prometric can be found on its website [www.prometric.com](http://www.prometric.com))

### ***The Proposed Testing Process in a Computer-Based Testing Environment***

This section provides an overview of how testing in a computer-based environment may work. *The testing process described is for general information purposes and may vary based on jurisdictional requirements.* The process is organized into the following six key events:

1. Candidate application and authorization for testing
2. Appointment to test
3. Test center preparation
4. Test administration
5. Post-test processing
6. Score reporting

#### **Event I: Candidate Application and Authorization for Testing**

The process begins when an individual applies to a State Board to take the CPA Examination. Currently, each jurisdiction has specific requirements on how that application is filed, how fees are collected, and certain other requirements that must be met before an individual may take the test and/or receive a license or certificate. These state requirements will be unaffected by the change in the testing process. (With regard to the collection of fees, several alternatives will be available to the boards, including having the board collect the fees from the candidates or designating a third party to collect the fees on the board's behalf, or a combination thereof.)

When the individual applies, the state records certain information in its files (either electronically or on paper). Once a State Board has determined that an individual is eligible to take the CPA Examination, the board will notify Prometric. Certain identifying information will be needed by Prometric for candidate identification purposes. This information is necessary to ensure that only authorized candidates make an appointment to test and to identify authorized candidates when they appear to take a test.

Within twenty-four hours of receiving notification from the state board, candidates may contact Prometric to make an appointment to test.

### **Event II: Appointment to Test**

After a candidate has received authorization to test from the State Board or its representative, he or she may make an appointment via a call center or Web site. The candidate will inform the scheduler of the preferred test center and test date. The authorization database will be checked to verify that the individual is, in fact, authorized to test. The test center database will also be checked to confirm that testing space is available. Candidates who call forty-five days or more before their desired test date should receive an appointment at the site and on the date they desire. After the appointment is confirmed, a confirmation will be provided to the candidate and to the state board, if so requested. (See the "Fees and Cost Considerations" section of this document for further discussion of the seat charges.)

### **Event III: Test Center Preparation**

The AICPA has the responsibility for developing the content of the revised Uniform CPA Examination. In processes separate from the computer-based test (CBT) process explained here, the AICPA will develop test questions and prepare them for computer delivery. The AICPA will group questions into a test pool from which individual tests will be drawn, include rules for the selection of test questions, and send a complete, quality-controlled "test package" to Prometric for distribution to test centers.

Over the past 10 years, Prometric has developed a highly secure means of transmitting data to and from its testing centers. All propriety data, including test packages and candidate test results, are protected behind security firewalls both in the Prometric data center and within the servers at the testing centers. Prior to transmission, all data is first fragmented into small packets and then randomly reassembled into a seemingly unintelligible data file. The scrambled data is then encrypted using a private key. This two-step process provides an additional layer of protection in which unauthorized decryption or data assembly attempts alone would be unsuccessful. In addition to test packages, Prometric transmits daily appointment information to the test centers to facilitate candidate verification and check-in procedures. Once at the test center, all test packages remain encrypted and are stored on a dedicated, password protected server that is stored in a locked metal cabinet that is bolted to the floor. Among other physical security precautions, all test centers are protected by centrally monitored perimeter alarm systems.

### **Event IV: Test Administration**

On the date of the test, candidates will be required to appear at the test center a minimum of thirty minutes before their appointment. At that time, the test center proctor will verify their identification (a photo-bearing ID will be required) and collect additional required security information.

Other options exist for the collection of additional security-related information. Prometric test centers have the capability of taking a digital photograph and attaching it to the record of examination results. This digital photograph would accompany advisory grades when they are distributed to boards, thus allowing boards to verify the identity of the candidate who took the test. Test centers can also collect a digital thumbprint and attach it to the candidate's record. Each of these options would provide a strong deterrent to impersonation; however, each would also result in an additional three-dollar increase in the cost of the test. The "Invitation to Respond" asks boards to indicate their preference with regard to the collection of this optional security information.

After the candidate's identity has been verified, a proctor will explain the testing procedures to the candidate and direct the candidate to store his or her belongings in lockers outside the testing room. The proctor will then enter information on a central computer and assign the candidate and the test to a

workstation in the testing room. The proctor will escort the candidate to the assigned workstation, enter information to activate the testing session, and seat the candidate.

The candidate will begin to take the test. During the testing session, test items will be delivered to the testing computer one at a time. That is, the entire test never resides on the testing computer. Instead, items are sent to the computer from the server as needed, unencrypted only while displayed to the candidate, and returned to the server from the computer following the candidate's response. At no time does the candidate have access to the operating system of the workstation. The computer is also configured to prevent the candidate from copying information to a disk or storing information on the testing computer itself for retrieval later. Testing rooms are under human and video/audio surveillance at all times to ensure that candidates do not communicate with one another even if they are taking different tests (for example, architects and accountants).

#### **Event V: Post-Testing Processing**

Once the test administration is complete, the test results will be sent electronically to Prometric. The test data will then be electronically transmitted to the AICPA for scoring. All responses will be scored by the AICPA. There are emerging technologies that may be able to score certain constructed responses, and those alternatives are being evaluated.

#### **Event VI: Score Reporting**

Once the AICPA has calculated grades and prepared the diagnostics, the grades and the diagnostics will be available to the boards with the boards accessing that information at their discretion.

#### ***Administration Issues***

A number of recommendations have been developed regarding the operation of the testing program when the new, computer-based examination is introduced. The CIC would like to receive feedback from boards as it finalizes these recommendations.

#### **Administration Windows**

One of the goals of computerization is to make test taking more convenient by providing additional opportunities for individuals to take the examination. In the computer environment, convenience is typically defined in terms of the frequency with which a test is offered. The goal of the CIC is to offer the test on a continuous basis. However, at launch, the recommendation of the CIC is that the test be offered in four three-month windows and that, within a three-month window, the test be available a minimum of two months. The remaining month will be used for data analysis, distribution of new question pools for security purposes, and other maintenance tasks. This means that candidates will be able to take the entire examination up to four times each year and will have up to 200 different days on which to take it. As the size of the question inventory increases and maintenance activities become routine, the test may be offered on a more continuous basis, providing even greater convenience to candidates and their employers.

The CIC recommends that, for security reasons and to encourage candidates to study between test attempts, candidates be allowed to take each section only once during an administration window.

#### **Time Limit for Taking All Sections**

With the increased convenience afforded by more frequent testing, there is an opportunity to provide more flexibility regarding when candidates take each of the four sections. At the request of the CIC, the Content Oversight Task Force (COTF) considered the requirements that should be imposed with regard to how quickly candidates should be required to take all four sections. The COTF recommended that flexibility be provided to examinees, including allowing candidates to take the sections in whatever order they preferred and that first-time test-takers should take all four sections within a thirty-day window period (taking the four sections in two days would no longer be required). The COTF's recommendation is based on its judgment that, in order to protect the public, it is important for candidates to demonstrate knowledge and skills across all four sections during a reasonable period of time. The COTF concluded that thirty

days was a reasonable timeframe. The CIC has not completed its work on policies and procedures for retakes.

**Conditioning**

To date, no changes have been recommended in the conditioning requirements. (In most jurisdictions conditioning requires the candidate to pass two sections of the examination and attain a minimum score on each of the other two sections.) A separate, but related, recommendation is that, because candidates will now have four opportunities to test each year, candidates be required to pass all four sections within a two-year, as opposed to the current three-year, time period. Candidates will have two more opportunities than they have currently and boards will obtain greater assurance that passing candidates' knowledge and skills are current.

## STRUCTURE AND CONTENT

This section provides an overview of the process used to develop recommendations for the content and structure of the computer-based Uniform CPA Examination.

### ***Practice Analysis***

A practice analysis is a recognized tool in the licensing field that is designed to—

- Determine the typical and critical activities performed by professionals.
- Assess which of those activities are important for entry-level practitioners.
- Determine when the knowledge and skills necessary for the activities are acquired.
- Provide a basis for the development of test specifications.

A practice analysis underpins the content validity of any licensure examination. The content and structure of the Uniform CPA Examination, which provides an effective means of protecting the public interest, should be based on the results of a current practice analysis. The Board of Examiners has recommended changes to the structure and content specifications for the Uniform CPA Examination based on the results of the *Practice Analysis of Certified Public Accountants*, completed in 2000. A more detailed discussion about the proposed structure and content specifications can be found in the Board of Examiners' exposure draft, *Proposed Structure and Content Specifications for the Uniform CPA Examination*. (See <http://www.aicpa.org/members/div/examiner/index.htm> for a downloadable copy of the exposure draft.)

### ***Proposed Structure and Content***

The Board of Examiners is proposing a design that will allow state boards of accountancy to draw independent inferences about candidates' competence in four areas believed to be critical to the protection of the public interest.

The four areas are:

- *Auditing & Attestation*. This section covers knowledge of auditing procedures, generally accepted auditing standards, and other standards related to attest engagements, and the skills needed to apply that knowledge in those engagements.
- *Financial Accounting & Reporting*. This section covers knowledge of generally accepted accounting principles for business enterprises, not-for-profit organizations, and governmental entities, and the skills needed to apply that knowledge.
- *Regulation*. This section covers knowledge of federal taxation, ethics, professional and legal responsibilities, and business law; and the skills needed to apply that knowledge.
- *Business Environment & Concepts*. This section covers knowledge of general business environment and business concepts that candidates need to know in order to understand the underlying business reasons for and accounting implications of business transactions, and the skills needed to apply that knowledge.

The Board of Examiners' proposal is based on the findings from the practice analysis, the need to protect the public interest, and its knowledge of the accounting profession. The Board of Examiners believes that the CPA Examination should test a CPA candidate's ability to demonstrate minimum knowledge and skills in the delivery of professional services that are restricted to licensees or in which CPAs have a significant effect on the public interest. For that reason, the proposed structure includes independent assertions about candidates' knowledge and skills related to auditing and attestation. Further, since most audit and attestation engagements relate to financial information and financial statements, the Board of Examiners concluded that a separate section on financial accounting and reporting is necessary.

CPAs also are responsible for abiding by the regulations that affect them and for providing services or advice regarding certain regulations (for example, tax laws). Thus, another required independent assertion is that CPA candidates should independently demonstrate knowledge of regulations, including taxation, business law, and professional ethics, and the skills necessary to apply that knowledge.

Finally, an independent assertion regarding CPA candidates' business knowledge and the skills necessary to apply that knowledge is necessary for several reasons. The practice analysis showed that knowledge of business concepts is important to the protection of the public. The Auditing Standards Board has recognized that understanding the business and its environment is a key factor in applying the audit risk model. In addition, the public often looks to CPAs, including those recently licensed, as business advisers. The Board of Examiners concluded that entry-level knowledge in this area currently is critical to audit effectiveness and thus to the protection of the public. As a result, the fourth proposed section of the examination is intended to test candidates' understanding of concepts related to business and the business environment, such as economics, information technology, and general business measurement.

The proposed examination content differs from the current examination in the following areas:

- The financial accounting and reporting subject areas have been grouped together to include financial accounting and reporting for business enterprises, not-for-profit organizations, and governmental entities.
- Taxation and law and professional responsibilities have been combined under Regulation.
- A new section on Business Environment & Concepts has been added. Approximately 40 percent of the content in this section was not previously tested on the Uniform CPA Examination.
- Testing of skills will be an integral component of the new examination.
- Knowledge of content primarily covered in one section of the Uniform CPA Examination may also be applied in another section when it is pertinent to testing a candidate's integration skills across major content areas.

### ***Testing of Skills***

Identification of the skills needed by entry-level CPAs was an integral component of the most recent practice analysis. The skills identified as necessary for the protection of the public interest include the following:

- Communication
- Research
- Analysis and organization
- Understanding
- Judgment

Candidates will be required to demonstrate their ability to apply these skills in each section of the Uniform CPA Examination in the context of the content knowledge. Skills will be assessed in a variety of ways, such as simulations, case studies and other test-item formats. Computer-based testing allows the use of many electronic tools such as spreadsheets, databases, and word-processors—all of which will be used in testing skills. In a limited fashion, the current examination tests a candidate's ability to communicate and analyze. CBT will provide allow state boards of accountancy with a more valid assessment of these skills.

The issues that CPAs, including entry-level CPAs, face in modern practice normally require them to understand and apply knowledge from diverse areas. For example, accounting issues often have audit or tax ramifications and the business environment can affect audit issues. Therefore, it is important that the Uniform CPA Examination test candidates' ability to integrate a wide variety of the knowledge tested on the examination. Accordingly, application of knowledge of content primarily covered on one section of the Uniform CPA Examination may be covered in another section when it is pertinent to testing a candidate's ability to integrate knowledge. For example, tax issues, which will be tested primarily in the Regulation



section, may arise in connection with accounting issues and, therefore, these tax issues may be tested in the Financial Accounting & Reporting section in the context of an accounting problem.

The inclusion of a section on Business Environment & Concepts, and the expanded testing of skills, represent important additions to the computerized Uniform CPA Examination. The CIC believes that these changes will ensure the examination admits individuals to the profession only after they have demonstrated the entry-level knowledge and skills necessary to protect the public interest in a rapidly changing business and financial environment.

The computerized CPA Examination reflects the body of knowledge and skills required for entry-level CPAs to protect the public. There is no intention, based on the practice analysis or any other information, to make the test questions any more or less difficult than the current paper-based examination. However, testing of additional required skills, such as research and integration, will change the material tested on the examination.

***Length of the Examination***

The length of the computer-based examination will be determined by balancing several competing factors. Those factors are—

- Length of time sufficient for the scores to be psychometrically reliable and valid.
- Length of time necessary to demonstrate the candidate has the appropriate depth and breadth of knowledge and skills to protect the public.
- Costs to the candidates.

The COTF has discussed the length of the examination and has not yet finalized its recommendations. However, it is expected the four proposed sections will not necessarily be equal in length. The length of the sections may vary according to the relative importance and depth of required knowledge and skills and the limits imposed to assure the psychometric integrity of scores. It is anticipated that the total time allotted to the four proposed sections will be no longer than fourteen hours. The range of total testing time under current consideration is from ten to fourteen hours.

Informative research must be completed based on the new examination structure and content (for example, the time required to test skills such as research) in order to finalize this recommendation. That research is in progress (see the “Research Collaboration” section of this document), and this recommendation is expected to be finalized in the fourth quarter of 2001.

***Transitioning***

The CIC requested that a task force of State Board members, executive directors, and practitioners identify and evaluate alternatives for the awarding of credit to candidates who, at the time CBT is launched, have earned conditional credit in their jurisdictions. The task force recommended to the CIC that the current four sections of the CPA Examination be considered equivalent to the new four sections of the examination for purposes of transitioning candidates who have conditioned by the 2003 launch date for CBT. This recommendation assumes the following corresponding equivalent relationships, by section, of the two examinations:

**If Not Passed on the Current Exam**

Auditing  
Financial Accounting & Reporting (FARE)  
Accounting & Reporting (ARE)  
Business Law & Professional Responsibilities (LPR)

**Need to Take on Revised Exam**

Auditing & Attestation  
Financial Accounting & Reporting  
Regulation  
Business Environment & Concepts

The task force discussed the effects the new Business Environment & Concepts section would have on the new examination. Much of this section is tested today on other examination sections, but not separately weighted on those sections. For example, information technology questions are tested on Auditing, but in the context of auditing. Financial management concepts are tested in the context of

financial accounting questions. Of the content areas that will be tested on the Business Environment & Concepts section that can be directly linked to weighted content areas on the current examination, the content area with the highest weight (Business Structure) is currently tested on LPR. As such, the task force concluded that LPR and Business Environment & Concepts could be considered equivalent for transitioning purposes.

Further, the task force believed it was not reasonable to recommend a transition model that would require a candidate to take more than a total of four sections. Under other transition alternatives, some candidates would take four sections and some would take five sections, depending on which sections the candidate had already passed. The task force believed that this would be inequitable.

Because of the significant differences in the two examinations, a perfect transition is not possible. The task force believes this recommendation best serves the candidates and the state boards.

### ***Design***

One of the many advantages of computer-based testing is the different types of test items that can be used. Under CBT, new stimuli can be included, such as online accounting reference materials, archived financial reports, and audio-visual clips. Examinees can further use online tools, such as spreadsheets, accounting packages, financial calculators, and graphical analysis packages. In addition to mimicking traditional multiple-choice response formats using check boxes, "radio" buttons, and simple open-ended answers using text input boxes, new input mechanisms are possible on the computer, including pull-down lists, drag-and-drop (for example, for moving objects from one place to another), online word processing with formatting capabilities, spreadsheet-like grid controls, and other features. These mechanisms can be creatively combined to produce many new types of items, such as case-based simulations in which the examinee is presented with a series of problems to solve or "products" to produce, given a particular business scenario.

### ***Content Development Activities***

During the next several years, a large item development effort will be undertaken to develop a sufficiently large inventory of test questions to support the new, computer-based examination.

A major factor in the need to develop a large inventory of test questions is security. Since computer-based tests are typically administered on a frequent basis, test questions will be exposed more often than they are currently. If a small inventory of test questions is available, it becomes more likely that candidates will become aware of the questions through conversations with others who have previously taken the exam. If, however, the inventory of questions is very large and a rotation schedule is developed that controls the frequency and length of time during which items are administered, the security risks are greatly reduced.

Approximately 10,000 multiple response questions and 500 simulations will be needed by the time the new examination is launched. In addition to the enormous item-writing effort needed to produce that quantity of items and simulations, all of the multiple-choice questions and simulations must be pretested (that is, tried out) *before* their inclusion on the scored sections of the computer-based examination.

It is not possible to pretest some of these questions on the current, paper-based examination (for example, simulations). We will need to establish an extensive pretesting program that exposes these questions to motivated test-takers, with similar knowledge and skills to the candidate population. Research suggests that each question will need to be answered by at least 1,000 individuals.

### ***Psychometric Development Activities***

One of the basic requirements for a licensure examination, such as the Uniform CPA Examination, is to measure only the knowledge and skills that are necessary for what the candidate is licensed to perform. In addition, it is necessary to measure the knowledge and skills at the appropriate level for entry into the field. The practice analysis described earlier, and the process followed to establish the structure and the content specifications, address these needs. However, these are not the only requirements. The examination must also be developed to provide fair and accurate estimates of a candidate's ability, regardless of the particular set of questions and materials presented to a particular candidate on a particular day.

The current paper-based Uniform CPA Examination is administered every six months and candidates in all fifty-four jurisdictions are administered the test on the same days. On the day of the test, more than one version of the examination is offered. The scores on these tests are equated to ensure that the scores reported on any version have the same meaning as the scores reported on any other. In a similar manner, the scores from the November and May administrations mean the same things. For example, a score of 75 on any version of the Audit test should indicate the same level of knowledge and skills as a score of 75 on any other version. Computer-delivered examinations are offered throughout the year; as a result candidates will be administered many different sets of items (that is, there is a much larger number of "test versions"). One reason for the required pre-testing of large pools of test questions is to enable psychometric equating methods to ensure that the many computerized versions of the examination are equally valid and fair.

A related effort involves extensive research on item development. The computerized examination will include more elaborate measurements of skills. These new elements require scrutiny by psychometric and subject matter experts in well-designed research studies.

To achieve the goals of developing an examination that measures the appropriate knowledge and skills at the appropriate level, a research collaboration initiative has been established involving several universities that have recognized expertise. In addition, several task forces have been created employing the talents of various subject matter experts and psychometricians.

### **Research Collaboration**

Accounting and psychometric professors from four universities are working with AICPA staff on a psychometric research collaboration to complete an agenda of applied research. These research studies address a variety of questions related to test scoring and scaling, new and existing item types, and the selection of an appropriate psychometric model to guide the design of the new computerized examination. In addition, these groups advise on potential security risks and solutions, candidate cheating, and other factors germane to the delivery of the examination.

The following chief psychometric investigators and universities comprise the Research Collaboration: Dr. Fritz Drasgow, from the University of Illinois at Urbana/Champaign; Dr. Steve Sireci, from the University of Massachusetts at Amherst; and Dr. Ric Luecht, from the University of North Carolina at Greensboro. Dr. Marjorie Shelley, of the University of Illinois at Urbana/Champaign, and Dr. Jack Krogstad, of Creighton University, are the subject matter experts for the collaboration.

The work of the Research Collaboration is periodically evaluated by the Psychometric Oversight Committee and involves some crossover collaboration with the Simulations task force (described in the following two sections). The Research Collaboration has been in existence for approximately a year and a half.

**Psychometric Oversight Committee**

A committee of distinguished psychometricians from academia and state agencies has been established to review the complex research and operational psychometric plans for the computer-based testing program and the results of the ongoing research efforts. This committee helps establish priorities to ensure that the scores from the computer-based examination will be fair, reliable and valid. Dr. Ron Hambleton of the University of Massachusetts at Amherst is the chair, and the members include Dr. Linda Crocker, of the University of Florida; Dr. Norman Hertz, of the state of California; Dr. Jim Impara, of the University of Nebraska; Dr. Robert Linn, of the University of Colorado; Dr. Richard Yeager (who passed away in October 2000) and Dr. Kara Schmitt, formerly with the state of Michigan. The psychometricians from the collaboration round out this committee.

**Simulations Task Force**

Critical benefits from computerizing the Uniform CPA Examination include the ability to more readily measure higher-order skills, such as integration of knowledge, and to provide realistic research and spreadsheet capabilities. One method of measuring these skills that may be used is to provide the candidate with a simulated practice problem of the type an entry-level CPA frequently encounters. Simulations are currently used in other computerized tests. Developing simulations for the CPA Examination requires specific knowledge of the profession and what is necessary to protect the public. A task force has been created and has started meeting to develop simulations for previewing and pilot testing; the task force comprises Dr. Shelley and Dr. Krogstad; Dr. Jan Williams, of the University of Tennessee; Jeffrey Tucker, CPA, of Rea & Associates, New Philadelphia, Ohio; Dr. Luecht; Dr. Drasgow; and AICPA staff.

## FEES AND COST CONSIDERATIONS

Although moving forward with a computer-based examination will have an impact on regulation in the public interest, the CIC is very much aware of cost sensitivity both for regulators and candidates. As a result, every effort is being made to contain the development, administration, and administrative costs for the computer-based test (CBT).

The fees and cost information provided in the following section are, in all cases, at the highest end of the anticipated range for the launch of CBT. The CIC is providing state boards of accountancy and other interested parties with these projected fees for purposes of planning and estimating; these fees, if they change, will decrease. Input from readers of this Briefing Paper will be a key factor in finalizing fees and costs for the examination.

### ***Fee Charges***

With the launch of CBT in November of 2003, three components will make up the fee charged to candidates:

1. The fee per section charged by the AICPA to jurisdictions (see appendix C for a discussion of the AICPA fee-per-section charge)
2. Any additional fees or charges that individual jurisdictions charge for administrative activities
3. An hourly “seat charge” for the candidate’s computer time while taking the examination (described in detail further in this section)

### ***Test Site Options and Related Fees***

Some jurisdictions have indicated an interest in owning and/or managing their own test sites, or in subcontracting administrative responsibilities to a third-party organization. As a result, jurisdictions will have a choice of three administrative models under CBT (the hourly seat charge varies under each model):

- *Model 1—Complete delivery by Prometric.* Prometric handles all aspects of computerized test delivery. Candidates will register with Prometric and take the examination in a Prometric test center. Jurisdictions will provide Prometric with data on candidates who are authorized to schedule a test.
- *Model 2—Jurisdiction provides sites; Prometric provides equipment and maintenance.* The jurisdiction provides the testing facility and manages the testing site(s) itself, but Prometric provides the computer equipment and handles the maintenance.
- *Model 3—Jurisdiction provides site(s), equipment, and management.* The jurisdiction handles all aspects of computerized testing, including the testing facilities, on-site administrators, equipment, and maintenance. Under this model, the jurisdiction’s testing facility and equipment must meet the minimum standards for Prometric’s high-stakes test centers.

The following table outlines specific responsibilities of Prometric and jurisdictions under each model, as well as the related hourly seat charge.

Model	Seat Charge <sup>1</sup>	Provided by Prometric	Provided by Jurisdiction
<b>Model 1:</b> Complete delivery by Prometric	\$20.00 per test hour	<ul style="list-style-type: none"> <li>✓ Scheduling and registration via central registration and Internet</li> <li>✓ Established test centers (including ADA compliance, furniture, alarm systems and site security devices, and communication lines)</li> <li>✓ Experienced CBT proctors</li> <li>✓ Standard equipment and workstations, processes, and procedures</li> <li>✓ Annual maintenance for equipment</li> <li>✓ Test download and upload</li> </ul>	<ul style="list-style-type: none"> <li>✓ Notification to Prometric that candidate is approved to test</li> </ul>
<b>Model #2:</b> Site(s) provided by jurisdiction; equipment and maintenance provided by Prometric	\$17.00 per test hour	<ul style="list-style-type: none"> <li>✓ Scheduling and registration via central registration and Internet</li> <li>✓ Standard equipment and workstations</li> <li>✓ Annual maintenance for equipment</li> <li>✓ Channel management support</li> <li>✓ Test download and upload</li> </ul>	<ul style="list-style-type: none"> <li>✓ Notification to Prometric that candidate is approved to test</li> <li>✓ Proctors</li> <li>✓ ADA compliance</li> <li>✓ All communication lines</li> <li>✓ Furniture other than workstations</li> <li>✓ Alarm systems and site security devices</li> <li>✓ Local scheduling</li> <li>✓ Processes and Procedures</li> </ul>
<b>Model #3:</b> Site(s), equipment and management provided by Jurisdiction	\$14.00 per test hour, plus \$18,000 annual channel management fee <sup>2</sup>	<ul style="list-style-type: none"> <li>✓ Scheduling and registration via the Internet</li> <li>✓ Test download and upload</li> </ul>	<ul style="list-style-type: none"> <li>✓ Notification to Prometric that candidate is approved to test</li> <li>✓ Proctors</li> <li>✓ ADA compliance</li> <li>✓ All furniture</li> <li>✓ Alarm systems and site security devices</li> <li>✓ Workstation equipment</li> <li>✓ Non-Internet registration</li> <li>✓ Communications lines</li> <li>✓ Local scheduling</li> <li>✓ Processes and procedures</li> <li>✓ Annual maintenance for equipment</li> </ul>

<sup>1</sup> Seat charge can vary from \$14 to \$20 per hour, based on volume.

<sup>2</sup> Covers Prometric's costs for management and maintenance of scheduling systems and test uploads and downloads. This fee is still under negotiation.

Although the exact length of the computerized CPA examination has not yet been determined, it is expected to be no longer than a total of fourteen hours. Computerization can allow for testing the required information within a shorter timeframe than in a pencil and paper environment. Since seat time is such a key component of costs, the CIC and the COTF are assessing the actual time needed to deliver a valid examination. The following chart shows the testing fee (maximum anticipated initial AICPA per section charge and maximum anticipated hourly seat charge) based on different possible lengths of the total computerized examination.

<b>Maximum Anticipated Test Fee</b>			
	Model 1	Model 2	Model 3 <sup>3</sup>
Hours 10	\$380.00	\$350.00	\$320.00
Hours 12	\$420.00	\$384.00	\$348.00
Hours 14	\$460.00	\$418.00	\$376.00

Fees for application processing, credential evaluation, score reporting, and other administrative expenses will remain the decision of each jurisdiction, as is currently the case.

Based on input that the CIC is seeking through this Briefing Paper from boards of accountancy regarding desired security measures, an additional fee or fees may apply. A digital photograph of the candidate may be captured at the test site and appended to examination results, providing boards with the ability to confirm that the registered candidate had actually taken the test. Prometric also has the capability to collect a digital thumbprint and attach it to the record. Each of these options would result in an additional \$3 per test.

Policies and fees associated with rescheduling and cancellations have not yet been finalized.

The CIC urges readers of this Briefing Paper to provide their feedback on all dimensions of costs. The enclosed "Invitation to Respond" elicits input on a number of cost-related questions and also provides space for additional thoughts and suggestions.

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<sup>3</sup> Excludes annual channel management fee.

## SECURITY MEASURES

Security surrounding the Uniform CPA Examination is one of the most critical issues being considered by the CIC. The CIC believes that the security standards and procedures applied to the current CPA Examination form a critical foundation for its reputation as a quality, national licensure examination. It is the goal, as well as a mandate of the CIC, that security for the computerized CPA examination be as rigorous as state-of-the-art measures allow.

Computer-based testing does change the risks of security breaches. However, the nature of computer-based testing affords many advantages over paper-based testing from a security perspective. For example—

- CBT reduces the number of individuals handling the exam thus reducing the risk that the examination will be compromised. Printers, shippers, and proctors will no longer have access to the examination.
- CBT allows the provider the ability to monitor non-authorized access to the examination. In an electronic environment, non-authorized access can be monitored and detected.
- CBT eliminates the need for printed exam booklets that can be stolen thus compromising the questions.

As mentioned above, CBT changes the risk of security breaches. The following chart, though not exhaustive, illustrates the potential for changes in security concerns.



<b>Security Threats</b>	<b>Threat in the Paper and Pencil Environment</b>	<b>Threat in a Computerized Environment</b>
Time-zone cheating	High	Low
Loss of booklets at examination sites	High	NA
Security breach at vault	Medium	NA
Booklets lost or stolen while in transit to examination sites	Low	NA
Collusion, with the potential for lost items, at examination sites	Medium	Low
Use of crib notes	High	Low
Fraudulent identification used by unauthorized candidates	High	Low
Use of electronic equipment to steal test items while at the examination site	High	Medium
Loss of test items during electronic transmission	NA	Low
Unauthorized access to server	NA	Medium
Unauthorized activity by candidates on break or in restrooms	High	High
Copying answers from a nearby candidate	Medium	Low
Unscrupulous test takers memorizing and stealing test items	High	Low

The preceding chart contains only a few of the issues that will be explored in the transition toward computer-based testing (CBT). At this time, processes and procedures affecting the security of the examination have not been completely developed. Security standards and procedures for the computerized CPA Examination will be thoroughly discussed among all examination constituencies and disseminated in future Briefing Papers as well as other formats. Over the next year, security procedures will be addressed at length by the Board of Examiners' Operations Committee, giving state boards ample opportunities to challenge current assumptions and offer feedback on future directions.

Today, Prometric has in place many security procedures and methods for delivering high-stakes examinations, including those of the National Board of Medical Examiners and National Association of Securities Dealers. Over the next year, the Operations Committee will review all security procedures and unique potential problem areas to ensure the successful delivery of the CPA Examination. Feedback from readers of this Briefing Paper will help in adding new procedures and modifying existing ones and will result in enhanced security in the administration of the Uniform CPA Examination.

## LEGISLATIVE ISSUES

The CIC recognizes that converting the CPA Examination to a computer-based test has legislative implications in many states. Even though much is similar across the fifty-four jurisdictions, there can be significant differences in statutes and rules as they apply, for example, to examination eligibility, maximum cost, conditioning, administration, and retake.

During the past eighteen months, the CIC and the Examinations Team have engaged in a number of initiatives to obtain an understanding of both the big picture and the nuances on a jurisdiction-by-jurisdiction basis. These initiatives have included conference calls, surveys, issue forums, formal presentations, regional meetings, and one-on-one discussions with executive directors and board members. As a result, guidance has been, and will continue to be, developed to assist jurisdictions in moving forward with any statutory and regulatory changes necessary to accommodate the adoption of a computer-based CPA Examination.

### ***The UAA—A Key Component in Expediting the Legislative Process***

#### **The Statute**

The Uniform Accountancy Act (UAA) is a model statute that is designed as a guideline for jurisdictions to use in the development of their own statutes and regulations. The section of the UAA that deals with the CPA Examination has been redrafted to better accommodate CBT. After exposure for public comment, the new language has been approved by the boards of directors of both NASBA and the AICPA and published as part of the November 1999 edition of the UAA.

Regardless of whether jurisdictions adopt the language literally, the CIC strongly recommends that they adhere to the underlying premises that governed the revised wording by—

- Continuing to recognize the need for uniformity.
- Keeping the statute language as general as possible to allow for needed flexibility.
- Relegating to the rules the specifics of matters such as the form and content of the examination, passing standards, conditioning requirements, and transitioning from a paper-based to a computer-based test.

#### **The Rules**

The specific details of transition and administration for the CBT will be housed in the rules accompanying the UAA. The draft language for the rules has been developed on a preliminary basis and will be finalized for public exposure and joint AICPA/NASBA approval following the exposure and approval of the content and structure of the revised CPA Examination. It is anticipated that the UAA will be distributed for public exposure during the third quarter of 2001. A current draft of the rules, for directional guidance only, is available by contacting the Examinations Team.

If they have not done so already, jurisdictions should review and determine changes they will need to make in their own statutes and rules to accommodate CBT. Any jurisdictions requiring assistance with revising their statutes or rules relevant to CBT should feel free to contact the Examinations Team at any time. If requested, the Examinations Team staff can meet with individual jurisdictions locally to assist in legislative efforts.

## NEXT STEPS

This section provides a summary of the milestone activities anticipated over the next twelve to eighteen months in the process of transitioning the CPA examination to a computer-based test. The purpose of this section is to inform key constituents of the major events and their accompanying timeframes so they can appropriately plan for the transition. In a project of this magnitude, dates and order of events can—and must—change to ensure the ultimate quality and timeliness of the CBT. The CIC is committed to keeping all interested parties apprised of any changes in timeframes that will affect planning and implementation processes.

### **Structure and Content Outlines**

Feedback from the exposure draft, *Proposed Structure and Content Specifications for the Uniform CPA Examination*, is due on July 1, 2001. Based on this feedback, the structure of the CPA Examination and the content specifications will be finalized. It is anticipated that this work will be completed by September 30, 2001. At that time, the Board of Examiners will begin to work on developing the content and the CIC will complete its work on policies and procedures for the computerized examination.

### **Content Development**

*Item Development.* As outlined in the “Structure and Content” section of this document, a large item development effort will be undertaken to create approximately 10,000 multiple choice questions and 500 simulations to support the revised CPA examination. These multiple choice questions and simulations must be pretested before their introduction as scorable items on the CPA Examination. Between now and August 2001, the multiple choice item writing process will go into full gear and will include: training of item writers and development of a pretesting network to include students, prospective CPAs in the workplace, and new CPAs. Pretest questions are expected to be written for the next twenty-four months.

*Simulations Development.* Throughout this calendar year, the CIC and the Examinations Team will be moving forward with the development of the simulations item bank. This process began in January with the creation of the task force (see the “Content and Structure” section). Next steps include: defining the item templates, designing component elements and scripts for the simulations, developing and pretesting possible simulations, and performing data analysis based on the pretesting results. The CIC expects to have prototype simulations by the third quarter of 2002.

### **Psychometrics**

Many aspects of the revised CPA examination require significant psychometric consideration in order to ensure that the examination is appropriately developed to provide accurate estimates of a candidate’s ability and is consistently fair within and across all testing jurisdictions. For example, the computer-based CPA Examination will incorporate a higher-level assessment of skills, which will require additional assessments. In addition, due to the increased frequency with which the CPA Examination will be available, each candidate will be given different questions or different groups of questions and it is important that candidates be evaluated consistently. Many psychometric issues are under study. The following summarizes the major initiatives:

- Identify the preferred psychometric model of administration for the computerized CPA Examination. At its March 2001 meeting, the CIC expects to consider a recommendation from the Board of Examiners’ Psychometric Committee about the preferred model.
- Conduct time studies to evaluate reasonable testing time required for each question type and the total testing time necessary for all four sections of the examination.
- Conduct standard-setting studies to compare and refine preferred methods of selecting a judicious cut score on each examination section.
- Conduct acceptability studies of the item types designed to measure higher-order skills.
- Conduct item-usage studies to determine the minimum number of test questions required during a window of operational testing to maintain high security and ensure representative and fair scoring.

### **Legislation**

The CIC will continue to monitor state laws and rules and encourage amendments, where appropriate, to accommodate the adoption of the computerized CPA Examination. The CIC will work with NASBA and the Joint AICPA/NASBA UAA Committee to follow up and assist state boards, where appropriate, in making changes. Any changes to the UAA will follow the normal UAA process that calls for the next exposure draft to be issued during the third quarter of 2001.

### **Policies and Procedures**

Specific policies and procedures for the revised CPA examination will be finalized in late 2001 and will be based on feedback from this Briefing Paper and input received through other vehicles. The anticipated dates of completion for developing policies and procedures for specific activities follow.

- Security—Third quarter of 2001
- Transitioning—Third quarter of 2001
- Conditioning—Third quarter of 2001
- Candidate application and reapplication—Fourth quarter of 2001
- ADA—Fourth quarter of 2001
- Authorization to test—Fourth quarter of 2001
- Appointment to test—Fourth quarter of 2001
- Test administration—Fourth quarter of 2001
- Grade processing—Fourth quarter of 2001
- Test assembly and distribution—Fourth quarter of 2001
- Review and appeal—Fourth quarter of 2001

### **Communications**

The CIC is committed to keeping all key constituencies apprised of the computerization process, before, during and after launch. These efforts will include but not be limited to:

- Participation in a number of academic and professional forums before the launch of CBT in an effort to educate constituents, gather input on the project, and hear feedback
- Sponsoring forums for educators, students, State Board executive directors and members of State Boards of Accountancy
- Timely written updates in the form of newsletters, briefing papers, articles, and mailings
- Online forums, updates, and opportunities for questions and answers
- Tutorials, CD-ROMs and internet forums to develop a comfort level and familiarity with the process of taking a computer-based examination
- Detailed manuals and instruction guides for different constituencies to provide step-by-step detailed information on the CBT

## APPENDIX A

### FREQUENTLY ASKED QUESTIONS ABOUT THE COMPUTER-BASED UNIFORM CPA EXAMINATION

**1. *Will computer-based testing (CBT) diminish jurisdictional control over the Uniform CPA Examination?***

*No.* The computerization process will likely change the administrative activities of the jurisdictions, their representatives, and the AICPA. However, it will not diminish the jurisdictions' responsibilities or the AICPA's responsibilities to develop the content. There will be changes in test administration for some jurisdictions. State boards that currently administer the test themselves may choose to administer the test in centers that they own or have the test administered in Prometric test centers or in test centers the boards sponsor, but which are administered by an approved third-party (for example, NASBA).

**2. *Will the role of the AICPA change under CBT?***

*Yes.* The AICPA will retain responsibility for overseeing the delivery of tests to test centers and the return of examination results, but this will now be done electronically. The AICPA will also have the responsibility of ensuring that the examinations are delivered and administered and the results are returned for grading according to the specifications established by the AICPA, state boards, and NASBA. The AICPA's responsibilities for creating and grading the CPA Examination will not change.

**3. *How will examination costs and fees for computer seat time be collected?***

*Jurisdictions will have the option to continue to collect all test fees.* The collection of test fees for computer seat charges may be collected by the jurisdiction or Prometric. Final decisions will be dependent on the preferences of the jurisdictions and what is allowable under state laws. State boards may want to discuss other options with the Examinations Team.

**4. *How will jurisdictions with fee caps be affected?***

*Jurisdictions should pursue legislative changes if needed.* The CIC strongly encourages the amending of state laws to increase or eliminate fee caps, where appropriate, to accommodate the cost of the CPA Examination in its computerized format.

**5. *How much candidate information will need to be provided to Prometric?***

*Prometric will need enough information to identify the candidates and communicate with them.* Once candidates are approved to test, they will contact Prometric to schedule a testing appointment. Since Prometric will be responsible for positively identifying the candidate at the test center and for contacting the candidate in the event of a center problem that requires the test to be rescheduled, Prometric will need identification and contact information. The AICPA, apart from the Examinations Team, has no access to examination data and will not have access to any individual information. The individuals responsible for grading the CPA Examination do not need, and will not have access to, any information about the individuals who take the CPA exam.

**6. *What controls will be in place to prevent candidates from registering and testing in multiple jurisdictions?***

*Prometric will enforce retest rules.* Under certain conditions, it may be appropriate for an individual to register and test in multiple jurisdictions (relocation, for example). However, it would not be appropriate for an individual to test in more than one jurisdiction within a particular administration window. This is another reason why it is important that Prometric have sufficient information to

identify the candidate. The scheduling software used by Prometric will not allow the same individual to make multiple appointments (within or across jurisdictions) in the same testing window.

**7. What assistance will be provided to candidates to help them prepare for the computer-based Examination?**

*Familiarization materials will be available on the Web and on CD-ROM.* These materials will be developed by the AICPA and made available to state boards, state societies, schools, and candidates.

**8. With candidates taking different tests, how do you ensure that each candidate is being correctly assessed?**

*The test delivery system will ensure that all tests meet content and psychometric specifications.* The testing package delivered to test centers will contain not only test items, but also the rules for the administration of tests drawn from that collection of items. All items will be classified according to their content and statistical properties before they are administered in an operational test. The testing software will then administer items according to the specifications to ensure that each candidate is administered a test of appropriate content coverage and difficulty.

**9. Will the pass-rate on the examination change under the new examination?**

*We don't know.* The CPA Examination content will be different under CBT, and it will assess more skills than the current examination does. Consequently, it is difficult to predict with accuracy what the exact impact will be on pass rates. The new examination will be aligned with entry-level practice, as determined by the practice analysis. If candidates' academic preparation and experience are also aligned with entry-level practice, the passing rate may appropriately increase. As the CBT project moves forward, pretesting and other forms of research will provide a better measure of how candidates are likely to react to simulations and other new forms of questions. This will, in turn, provide some indication of whether passing rates will change. However, other factors (such as the 150-hour requirement) could also affect the passing rate in ways that will not be apparent during the development of the new examination.

**10. Will the CBT be graded on a numerical scale or pass/fail?**

*A numerical scale.* However, the numerical scale used under CBT might be different than the one used currently. Providing scores to failing candidates helps them understand how close they were to passing and determine how much additional preparation is necessary before retesting. Providing this information is also consistent with the professional standards for testing.

**11. How and when will candidates get grades, and will there be diagnostic information included?**

*Distribution of grades is the responsibility of state boards of accountancy.* State boards will decide how and when candidates receive grades. Advisory grades and diagnostic information will probably be available within two weeks of the candidate's test date and will be provided to boards, or their designee, as they are approved. Each board could set its own schedule regarding the frequency with which it will approve and release grades.

**12. What are the conditioning requirements for testing under CBT?**

Conditioning requirements are established by State Boards of Accountancy and at this time, the CIC has not completed its work on this subject.

**13. Will CBT affect the number of candidates taking the CPA Examination?**

*We don't know.* Before the launch of CBT, there may be some concern among CPA candidates about the new examination. This may result in more candidates than usual taking the examination in the paper-based format in an effort to complete it before the implementation of CBT. It is also possible that some candidates might take a "wait and see" approach to CBT. If this occurs, the initial volume under CBT will be below historical levels. Other factors, such as the 150-hour requirement and declining enrollments, may also affect volume. It will be difficult to separate the effects of these different influences on candidate volume.

**14. How likely is the 2003 launch date?**

*Very likely.* However, the feasibility of the launch date will be evaluated every six months, and state boards and other constituents will be notified of any changes.

**15. Does Prometric own its test centers or are they franchised?**

*Prometric has corporate and licensed centers.* Prometric will use its network of high-stakes testing centers (approximately 350) to deliver the CPA Examination. Approximately 40 percent of all of the high-stakes examinations delivered by Prometric are administered through its corporate-owned centers. Corporate-owned centers tend to be in high-volume, metropolitan areas. The remainders of the tests are provided through Prometric Testing Centers (PTC). The PTCs operate under licensing agreements with Prometric. The license agreements ensure that the PTCs meet the same requirements as corporate-owned centers, and require specific, uniform equipment and operational procedures.

**16. How many sites does Prometric have in each jurisdiction?**

*It varies based largely on population.* Prometric has at least one test site in each of the fifty-four jurisdictions. Prometric's test centers are located within twenty-five miles of 90 percent of the U.S. population. Analysis of historical demographic information of CPA Examination candidates is underway to determine whether adjustments are needed in the number or size of centers to accommodate the CPA Examination volume. Please refer to appendix B for a list of cities in which Prometric has test centers. The list includes only the current cities where test centers are located and may change between now and 2003.

**17. What happens in the event of a power failure, computer crash, or other interruption?**

*In most cases the examination resumes at the point of the interruption.* The action taken will depend on the type and length of any interruption. Ordinarily, a candidate's test can be restarted from the point of interruption. If an interruption is of a longer duration, accommodations will be made to allow the candidate to test again as soon as practicable.

**18. Will foreign candidates be able to test outside of the fifty-four jurisdictions?**

*No.* Foreign candidates will continue to be required to test within the fifty-four jurisdictions that currently administer the CPA Examination.

**19. Will all candidates take the same examination, or will each candidate take a different test?**

*Candidates will take different, equivalent exams.* In the computerized testing environment, each candidate's examination will consist of items drawn from a pool of test questions according to defined specifications. Although candidates will take different tests, the specifications will ensure that the results are comparable. The specifications will also include "exposure controls" to limit the extent to which examinees are administered the same sets of questions.

**20. How will essays be handled under CBT?**

*Essays will likely be incorporated into simulations.* The practice analysis report supports the testing of writing skills and simulations provide an effective means of testing writing skills. A special task force consisting of CPAs, psychometricians, and writing experts has been convened to consider and make recommendations concerning whether essays should be part of both the current and the new CPA Examination and, if so, how they should be developed, scored, and reported. Research is also planned to investigate more economical methods of scoring essays if they are included in the new exam.

**21. Is there a possibility of the examination being introduced without simulations?**

*Probably not.* Simulations provide a significant enhancement to the current paper-based test, and it is expected that they will be a key component of the computer-based test.

**22. Does CBT inhibit states' ability to monitor candidates?**

*No.* State boards' responsibilities will not be diminished or negatively affected under CBT. State boards will continue to determine candidates' eligibility and provide test results. State boards have the responsibility to administer or oversee the administration of the CPA examination in their jurisdiction. State Board members will also have access to test sites.

**23. When a board approves a candidate to test, is there a time limit on when the candidate has to test?**

*No.* Time limits placed on testing, if any, will be based on the state board's requirements. However, the COTF and the CIC have recommended that first-time candidates be required to take all sections within thirty days once they begin the testing process. Prometric should grant candidates their preferred dates and test sites if they schedule at least forty-five days in advance.

**24. How are problems with test centers handled? For example, if there is a problem at one test center, does it affect all test centers in a jurisdiction?**

*Test center problems are resolved on a center-by-center basis.* Depending on the situation, candidates may have to be rescheduled or provided other forms of accommodation. Test center performance will be critically monitored to ensure a consistent level of service. Test centers that repeatedly fail to meet performance criteria can be closed.

**25. Will there be ample availability for CPA examination candidates in test centers, given the number of other examinations administered by Prometric?**

*Yes.* Prometric is conducting data analysis on historical demographic CPA Examination data to ensure the adequacy of the number of seats and/or test sites for the CPA Examination. Adjustments will be made, where necessary, to increase the number of seats in centers or to increase the number of test sites.

**26. How does CPA Examination volume affect overall testing capacity of Prometric?**

*The CPA Examination will be a significant percentage of Prometric's overall test volume.* The CPA Examination will be its second largest professional test program. Prometric will make necessary adjustments to handle the increase in volume.

**27. Who will be responsible for certifying someone as an ADA candidate?**

*State boards will be responsible for determining if a candidate is an ADA candidate.* —



**28. What are the cost implications to candidates who need to change testing dates or locations or reschedule a test?**

*These changes will require an additional fee.* The Prometric business model is similar in many respects to that of an airline reservation system. Once a candidate schedules a test, he or she is allotted a specific block of time, at a specific computer terminal, in a specific test center. Since Prometric will have reserved that seat and not made it available to other candidates, there will be fees associated with changing test dates and/or locations, rescheduling, and no-shows. The amounts of the fees have not yet been finalized.

**29. What will be the processes and procedures to challenge test results?**

*Review and challenge will be authorized by the board and supervised by a board representative.* The specifics of how review will work in a CBT environment have not been finalized. However, the Prometric system includes a provision whereby a candidate, accompanied by a board representative, may return to a test center to review the questions he or she answered incorrectly. This issue will be finalized based on input from state boards and other constituencies. Fees for the review service will be determined when the policy is approved.

**30. Can state boards contract with other vendors for the administration of jurisdiction test centers?**

*Yes, within limits.* It is not possible, for example, for a jurisdiction to contract with another commercial CBT delivery vendor that is in direct competition with Prometric. Jurisdictions may, of course, contract with NASBA for these services. Jurisdictions wishing to contract with other organizations for administration of their test centers should consult with the AICPA.

**31. Will State Board representatives be able to monitor Prometric and perform on-site visits?**

*Yes.* The AICPA will make available to state boards performance information on Prometric test centers. State Board executive directors and board members will also be authorized to visit test centers.

**32. What are the implications of CBT on ADA candidates (from a cost and logistics standpoint)?**

*Prometric will be able to accommodate ADA candidates, but at a cost.* Currently, each state pays the additional cost of test administration to ADA candidates (if any). The AICPA will work with boards to determine whether this is the best solution in the CBT environment or whether all boards should share equally in the expense of providing these services.

**APPENDIX B****CITIES WITH PROMETRIC TEST CENTERS****Alabama**

Birmingham  
Dothan  
Decatur  
Montgomery  
Mobile

**Alaska**

Anchorage

**Arizona**

Phoenix  
Goodyear  
Tucson

**Arkansas**

Arkadelphia  
Fort Smith  
Little Rock

**California**

Anaheim  
Atascadero  
Brea  
Chico  
Culver City  
Diamond Bar  
Fair Oaks  
Fremont  
Gardena  
Glendale  
Irvine  
Los Angeles  
Palm Desert  
Piedmont  
Rancho Cucamo  
Redlands  
Riverside  
San Diego  
San Francisco  
San Jose  
Santa Rosa  
Walnut Creek  
Westlake Village

**Colorado**

Boulder  
Colorado Springs  
Denver  
Glendale  
Longmont  
Pueblo

**Connecticut**

Glastonbury  
Hamden  
Norwalk

**DC**

Washington

**Delaware**

Wilmington

**Florida**

Davie  
Fort Myers  
Gainesville  
Hollywood  
Jacksonville  
Maitland  
Miami Lakes  
Orlando  
Sarasota  
Tallahassee  
Tampa  
Temple Terrace

**Georgia**

Albany  
Atlanta  
Augusta  
Jonesboro  
Macon  
Marietta  
Savannah  
Valdosta

**Guam**

Hagatna

Dedeo

**Hawaii**

Honolulu  
Kailua

**Idaho**

Boise  
Carbondale  
Chicago  
Homewood  
Lombard  
Northbrook  
Peoria  
Springfield  
Sycamore  
Westchester

**Indiana**

Braintree  
Evansville  
Fort Wayne  
Indianapolis  
Lafayette  
Merrillville  
Mishawaka  
Terre Haute

**Iowa**

Ames  
Bettendorf  
Sioux City  
W. Des Moines

**Kansas**

Topeka  
Wichita

**Kentucky**

Lexington  
Louisville

**Louisiana**

Baton Rouge  
Bossier City  
New Orleans

**Maine**

Orono

S. Portland

**Maryland**

Baltimore  
Bethesda  
Columbia  
Lanham  
Pikesville  
Salisbury

**Massachusetts**

Boston  
Braintree  
Brookline  
E. Longmeadow

Lexington

Waltham

Worcester

**Michigan**

Grand Rapids  
Lansing  
Livonia  
Portage  
Southfield  
Troy

Utica

**Minnesota**

Bloomington  
Duluth  
Rochester

St. Cloud

Woodbury

**Mississippi**

Jackson  
Tupelo

**Missouri**

Ballwin  
Cape Girardeau  
Jefferson City  
Lee's Summit  
Springfield  
St. Joseph  
St. Louis

**Montana**

Billings  
Helena  
**Nebraska**  
Columbus  
Lincoln  
Omaha

**Nevada**

Las Vegas  
Reno

**New Hampshire**

Portsmouth

**New Jersey**

Deptford  
East Brunswick  
Fair Lawn  
Hamilton  
Toms River  
Union  
Verona

**New Mexico**

Albuquerque

**New York**

Albany  
Brooklyn Heights  
Buffalo  
East Syracuse  
Financial District  
Garden City  
Ithaca  
Manhasset  
Melville  
Midtown  
Penn Plaza  
Queens/Rego Park  
Rochester  
Staten Island  
Vestal  
Wall Street  
Wappingers Falls

White Plains

**North Carolina**

Asheville  
Charlotte  
Gastonia  
Greensboro  
Greenville  
Raleigh  
Salisbury  
Wilmington

**North Dakota**

Bismarck  
Fargo

**Ohio**

Akron  
Centerville  
Cincinnati  
Columbus  
Hilliard  
Lima  
Mentor  
Niles  
Reynoldsburg  
Strongsville  
Toledo

**Oklahoma**

Oklahoma City  
Tulsa

**Oregon**

Eugene  
Milwaukie  
Portland

**Pennsylvania**

Allentown  
Clarks Summit  
Erie  
Harrisburg  
Lancaster  
Montgomeryville  
Philadelphia  
Pittsburgh  
York

**Puerto Rico**

Hato Rey

**Rhode Island**

Cranston

**South Carolina**

Charleston  
Greenville  
Irmo

**South Dakota**

Sioux Falls

**Tennessee**

Chattanooga  
Clarksville  
Franklin  
Johnson City  
Knoxville  
Madison  
Memphis

**Texas**

Abilene  
Amarillo  
Arlington  
Austin  
Beaumont  
Bedford  
Clear Lake  
Corpus Christi  
Dallas  
El Paso  
Kingwood  
Lubbock  
Mesquite  
Midland

New Braunfels

San Antonio

Sugar Land

Tyler

Waco

**Utah**

Ogden  
Orem  
Salt Lake City

**Vermont**

Williston

**Virginia**

Fairfax  
Lynchburg  
Mechanicsville  
Newport News  
Roanoke

**Virgin Islands**

St. Croix

**Washington**

Mountlake Terrace  
Puyallup  
Spokane

**West Virginia**

Morgantown  
S. Charleston

**Wisconsin**

Madison  
Milwaukee/Fox Point  
Milwaukee/New Berlin

**Wyoming**

Casper

## APPENDIX C

### AICPA FEE PER SECTION

In January 2000, the AICPA announced a two-tiered increase in the per-section fee for the paper-based examination with the first increase effective November 2001 (\$31) and the second in November 2002 (\$45). The November 2002 increase also covers the first year of computer-based testing (CBT).

In conjunction with the AICPA, the CIC felt it was critical that all constituencies understand the rationale for the pricing structure, although aspects of it are not specifically under the CIC's charter. Two issues seem to be of particular concern to examination constituencies:

1. Why the costs of the paper-based examinations are increasing
2. The fee per section under CBT may be too high to pass state legislative scrutiny

### Fees and the paper-based examination

Fees on the paper-based examination are increasing for various reasons including a need for increased security, enhanced psychometric involvement, and, unfortunately, the decline in the volume. Each of these issues are discussed in greater detail.

- *Security.* Protecting the integrity of the Uniform CPA Examination is an absolute priority for the AICPA as it is to the jurisdictions that depend upon it as a key step in the licensure process. The Uniform CPA Examination has become a target for a number of cheating scams intended to assist candidates in illegally gaining access to questions and thus fraudulently obtaining a license or certification. Since November 1999, the AICPA has spent approximately \$400,000 annually to thwart cheating and protect the exam.
- *Multiple forms.* In November 1999, in response to allegations of cheating rings and to make the exam more secure, the AICPA started using multiple forms. The cost to create multiple forms, which require more questions, significantly affects the cost of the examination. Multiple forms require that hundreds of additional questions be written, reviewed, and pretested each year. Multiple forms require multiple sets of proofs, additional processing, and multiple scoring guides. In addition, previous alleged cheating activities have tainted a number of examination questions, making them unavailable for future use. Although the test-item bank is sufficient to sustain the examination, there are financial ramifications resulting from the loss of the items.
- *Need for psychometrically sound exam.* At the NASBA Annual Meeting in Tucson, a noted psychometrician provided the attendees with a scorecard to evaluate the psychometric aspects of an exam. It included the need for psychometric research on issues unique to the particular exam, practice analyses, and new standard-setting studies. Various state boards also raised many of these same issues as they went through sunset review. In response to these concerns, the AICPA has increased its psychometric staff accordingly. In support of the paper-based examination, the AICPA's psychometric team has just completed a full-scale practice analysis, is researching new ways to set the passing standard, is performing detailed statistical analyses of the multiple forms after each administration, and is investigating the role of essays in a paper-based examination.
- *Volume decline.* As difficult as it is to discuss, there is the reality of the declining number of individuals sitting for the Uniform CPA Examination. In the last ten years, the number of candidates has dropped twenty percent. As such, the current fixed costs are being spread over a smaller base. The AICPA is actively working with high schools and the academic community to attempt to reverse this trend.

After the announcement of the per-section fee increase, the AICPA Examinations Team hosted a series of telephone conferences with state boards to hear their concerns. (See the letter to State Boards from Gregory Johnson dated August 18, 2000 for a summary of those calls. Please contact Gregory for additional copies.) There are several issues that need to be resolved.

- NASBA receives support from the examination fee for the Examinations Review Board and the grade reporting processing services. Based on the advice of many boards, the AICPA is meeting with NASBA to discuss this issue.
- The AICPA is in the process of evaluating the need to replace our computer system. The AICPA may conclude that its current system will be adequate for the last five paper exam administrations. That decision could reduce the fee by approximately five dollars per section.

***Computer-based testing.***

In many respects, it is difficult to anticipate the cost per section for a computer-based examination. In order to assist boards in their legislative activities, the AICPA has committed to the \$45 per-section fee for the first year of CBT. Much of the information garnered about the cost to develop a computer-based test is based on the experiences of other licensing or credentialing examinations that have made the conversion. In all cases, the per-section fee under CBT increased from the paper-based examination. The need for large item banks, the psychometric challenges, ongoing maintenance, and psychometric research are the main contributors to this increase. One of the AICPA's primary goals is to keep the costs from increasing beyond those that are absolutely essential to providing a secure examination that protects the public interest, and it is committed to that end. If the AICPA finds that the costs are lower than anticipated under CBT, it will return the excess funds to the examination either through reduced seat charges, a reduced fee per section, or some other mechanism.

March 5, 2001

Dear Colleague:

As Chair of the Joint AICPA/NASBA Computerization Implementation Committee (CIC), I am pleased to share with you the attached Briefing Paper No. 2, *Computerizing the Uniform CPA Examination—Issues, Strategies, and Policies: An Update*.

Please read it with a big-picture perspective—a perspective that focuses on the changing realities in which the examination will be operating. Examples include—

- A marketplace that continues to challenge the work of entry-level CPAs.
- The continued evolution of the services that CPAs provide.
- The need for entry-level CPAs to be technologically competent.
- The rate and pace at which new information must be assessed and assimilated.
- The increasingly complex requirements of the public interest that we serve.

A computer-based examination plays a key role in meeting the challenges presented by these changing realities. By staying aligned with the expanding “real world” requirements of entry-level work and testing required skills in a more robust manner, a computerized examination helps ensure an uninterrupted examination process that protects the public interest. A computer-based Uniform CPA Examination also makes available to the regulatory community a number of powerful benefits:

- The ability to test the *skills* identified by the practice analysis
- The ability to offer the examination at more frequent intervals
- The ability to offer the examination at more locations
- Increased examination security
- Administrative efficiencies

Based on these compelling benefits, the CIC believes it is essential to revise the Uniform CPA Examination and that a computerized test is the most efficient and cost-effective way to do so. However, the CIC also realizes that many approaches and many opinions need to be explored, considered and incorporated in order to implement a computer-based test successfully. So, on behalf of the CIC, I urge you to make your voice heard in this critical process. We need your insights and your assistance.

Since our inception over three years ago, the CIC has sought participation, advice, and feedback from the regulatory community and other parties interested in assuring that entry-level CPAs possess the knowledge and skills necessary to protect the public interest. We have heard and responded to your concerns. In fact, the feedback from our original Briefing Paper was a major contributor to our redirecting the model and design of the computer-based test.

The comments we receive regarding Briefing Paper No. 2 will continue to help guide our thinking and our actions as to the content, structure and policies for the launch of the computer-based test. Enclosed is an “Invitation to Respond,” which I urge you to complete and return to us. We encourage an official State Board of Accountancy response in addition to your individual comments. You can either mail it in the postage-paid envelope or fax it to us. When the results are tabulated and analyzed, we will be issuing a summary document.

The AICPA’s Board of Examiners has issued an exposure draft, *Proposed Structure and Content Specifications for the Uniform CPA Examination* that recommends a four-section examination covering Auditing & Attestation; Financial Accounting & Reporting; Regulation; and Business Environment & Concepts. We encourage you to consider the exposure draft in conjunction with this Briefing Paper. The Exposure Draft is found at [www.aicpa.org](http://www.aicpa.org).

On behalf of the CIC, thank you in advance for your participation in this vital process. I assure you that during the months ahead, as our activities move forward, we will continue to keep you informed and to seek your counsel and advice.

Sincerely,

William W. Holder  
*Chair, Computerization Implementation Committee*

**INVITATION TO RESPOND**

**BRIEFING PAPER NO. 2—  
COMPUTERIZING THE UNIFORM CPA EXAMINATION  
Issues, Strategies, and Policies: An Update  
(Comments due by July 1, 2001)**

Please take a moment to complete the following questions. The information you provide will be of critical importance as we move forward with the computerization process. **Use the enclosed stamped envelope to return the questionnaire, or if you prefer, you may fax it to Gregory Johnson at (201) 938-3443.**

Name \_\_\_\_\_  
Title \_\_\_\_\_  
Organization \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
Telephone \_\_\_\_\_  
E-mail \_\_\_\_\_

Check all that apply:

<input type="checkbox"/> Public Practice	<input type="checkbox"/> Official State Board Response
<input type="checkbox"/> Education	<input type="checkbox"/> State Board Executive Director
<input type="checkbox"/> Industry	<input type="checkbox"/> State Board Chair or Member
<input type="checkbox"/> Government	<input type="checkbox"/> AICPA Member
<input type="checkbox"/> CPA	<input type="checkbox"/> State CPA Society Member

**Value Proposition for the Revised Uniform CPA Examination**

1. Which of the following best indicates your opinion of the following statement?

In order to protect the public, the Uniform CPA Examination should assess candidates' entry-level knowledge of professional standards and regulations and the skills needed to apply that knowledge such as communication, research, analysis and organization, and judgment.

- Strongly in favor
- In favor
- Undecided
- Opposed
- Strongly opposed

2. Please provide additional comments and feedback on the value proposition. \_\_\_\_\_  
\_\_\_\_\_

**The Proposed Computer-Based Testing Process**

3. How would you suggest collecting fees?

- Board collects all fees.
- Board collects its fee, and another party collects the test fee.
- Another party collects all fees.
- Other options: \_\_\_\_\_

4. Do you agree with the recommendation that all first-time test takers be required to take all four sections of the examination within thirty days?

- YES    NO   If no, please comment. \_\_\_\_\_  
\_\_\_\_\_

5. Do you support changing the conditioning time limit from the current requirements (generally six administrations in three years) to eight administrations in two years under CBT?

- YES    NO   If no, what would you recommend? \_\_\_\_\_  
\_\_\_\_\_

**Structure and Content**

6. Assuming that it is possible to assess critical entry-level knowledge and skills, such as the ability to analyze, organize, and integrate information, and obtain reliable information about whether a candidate should pass or fail, would it be acceptable to have a Uniform CPA Examination of—

- 10 – 12 hours?    YES    NO  
12 – 14 hours?    YES    NO

Other options: \_\_\_\_\_

If these ranges are not appropriate, what would you recommend? \_\_\_\_\_  
\_\_\_\_\_

7. Do you agree with the transitioning recommendation (see pages 13-14)?

- YES    NO   If no, what would you recommend? \_\_\_\_\_  
\_\_\_\_\_



**Fees and Cost Considerations**

8. Which of the three administrative models for CBT do you find most preferable?
- Model No. 1 Prometric Test Centers
  - Model No. 2 Jurisdiction (or designee) test center outfitted by Prometric
  - Model No. 3 Jurisdiction (or designee) test center outfitted by Jurisdiction

Why? \_\_\_\_\_

9. Please describe how much weight the Computerization Implementation Committee (CIC) should place on costs when evaluating the various recommendations and components of the examination?

\_\_\_\_\_

**Other Items**

10. Do you support collecting a digital photograph at the test center (\$3 additional charge per test section)?
- YES     NO
11. Do you support collecting a thumbprint (ink on paper) at the test center (\$3 additional charge per test section)?
- YES     NO
12. In general, how informed do you believe you are about the computerization process?
- Very informed
  - Informed
  - Missing some information
  - Not informed
13. Which areas of computerization would you like to learn more about?
- Cost
  - Legislative issues
  - Content
  - Structure
  - Security
  - Policies and procedures
  - Psychometrics
  - Other \_\_\_\_\_
14. How would you rate the amount of detail included in Briefing Paper No. 2?
- Too much
  - Sufficient
  - Not enough

Additional comments: \_\_\_\_\_

\_\_\_\_\_

15. Were there any topics NOT included in the Briefing Paper that you would have liked information on?
- No
  - Yes. Please specify. \_\_\_\_\_
16. Have you ever visited a Prometric or other computer-based testing center?
- No
  - Yes    Perceptions: \_\_\_\_\_

\_\_\_\_\_

17. Have you ever taken a computer-based test?

No

Yes

Perceptions: \_\_\_\_\_

\_\_\_\_\_

18. What two areas do you view as key to ensuring the successful implementation of a computer-based test?

(1) \_\_\_\_\_

(2) \_\_\_\_\_

19. What support can the CIC or the AICPA provide you to help facilitate implementation of the CBT?

\_\_\_\_\_

\_\_\_\_\_

20. Are there any areas in which you would like to be actively involved with regard to the computerization effort? (Check all that apply.)

Policy guidance

Pilot testing

Research collaborative

Pretesting items or item formats

Other \_\_\_\_\_

\_\_\_\_\_

21. Additional comments:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Thank you for your candid comments. Once the results are tabulated, you will receive a document detailing the findings of this research.