Reflective essay: general application of the content of the readings to life as a Christian scholar and to work within the discipline.  
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Title: My Life as an Associate Professor in the 
Department of Information and Computer Sciences at 
Covenant College

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Introduction

In this paper, I seek to address the implications of being an Associate Professor of Information and Computer Sciences at Covenant College, a reformed, evangelical, Christian, liberal arts institution. I approach this task in the following order.

First, I describe my work at Covenant College. My position is Associate Professor in the Department of Information and Computer Sciences. My education and training are broader than required to teach in that department. Consequently, because of my background and the needs of the Mathematics and Business Departments, I teach a course for each of those departments.

Second, all truth is God’s truth. Jesus declared himself to be the Truth. Therefore, students need to integrate scientific truth with their understanding of God’s biblical revelation and his relationship to his creation. I discuss the matter of relating technological advances and issues with a biblical world view.

Third, scientific advances present new challenges to our faith in and walk with the Lord Jesus. I describe how I seek to identify and clarify these challenges for Covenant students, and to find ways to enjoy and glorify him in the process.

Last, many of the challenges presented by the use of information technology are specific to our roles (callings) in society. I describe some of these and how I challenge my students to come to grips with them.
I. My Work at Covenant College

My PhD is in Management Information Systems (MIS). MIS focuses on the application of Information Technology (IT) to meet the needs of business enterprises and non-profit organizations. IT is commonly understood to consist of computers and communication technology.

My terminal degree is from the College of Business at Auburn University. Before entering the MIS doctoral program, I received degrees in Business Administration both at the Bachelor and Master levels. So, my education includes studies in Management, Finance, Economics, Marketing, etc. My first degree was a Bachelor of Industrial Engineering, and I also have a M.Div. from a Presbyterian seminary.

I recount my educational background, not to impress anyone with the years I’ve spent in academia (nor to seek sympathy), but to explain why, although my position is Associate Professor in the Information and Computer Sciences Department, my work at Covenant College also includes teaching Algebra for the Department of Mathematics, and Accounting Information Systems for the Department of Business. I view these courses as integral to my work, not as interruptions or distractions.

The courses I teach in the ICS Department are application-oriented. They are: Information Systems for Management (a survey of the ways in which IT is used to meet the needs of organizations), Systems Analysis (an introduction to systems concepts and analytical techniques), Database Concepts (a study of database architecture and design considerations), and I also teach Microcomputer Applications, the core course required of
all students except those majoring in Education. (The Education Department has its own
equivalent course.) The purpose of this last course is to insure that all our students
acquire a basic understanding of computers, competency in using them for
communication and personal productivity, and a grasp of ethical concerns to which they
give rise. In keeping with my background in engineering, we also consider ethical
concerns in other areas of technological innovation.

II Christian Perspective and Concerns

All truth is God’s truth. Jesus declared himself to be the Truth. Jesus is
preeminent Truth, God’s revelation of himself. He is God’s Word and his agent in
creation. It is incumbent upon us as his followers to integrate our knowledge of God with
our understanding of his creation (science) and his relationship to it.

First, we have the mandate given by God in the Garden of Eden to be fruitful, and
multiply, and subdue the earth (Genesis 1:28-30). As his image-bearers (Genesis 1:27),
we are given stewardship of the created order. He gave us the creativity by which
technology was invented, and it honors him for us to exercise our talents and abilities to
provide for the needs of our families and others. Several decades ago, one-third of
American adults were employed in producing food to feed our nation. Today one tenth of
that proportion (i.e. 3.3%) produces an abundance of food for the US population and for
export to other peoples. This has come about largely through technological innovation in
hybrid crops, and labor-saving machinery.
Therefore, we need to affirm our creative gifts, to rejoice in them, and to thank God for them. Consider our ability to find and extract potable water for residents of dry areas. What a gift! Consider also cellular phones which can utilize communication satellites. These can enable developing nations to forego the stringing of wires across their lands to develop their communication infrastructure. Electricity can now be generated by wind and solar collectors thereby speeding the development of these nations. We possess marvelous technologies we should share with less-developed nations.

Second, and paramount, of our concerns is that we are fallen creatures. We are distorted images of God. As Christians, we are forgiven, and no longer bound under the power of sin. However, although God is faithful to provide a way of escape when we are tempted to sin (I Corinthians 10:13), we all too frequently choose not to take the way of escape. Therefore, let us recognize that we are enmeshed in the problems of society even as we seek to alleviate them.

For example, the application of IT causes disruption in businesses. The long-term goal of its use is to make businesses more efficient, to produce more with less. We hear much in this election year about the decrease of high-wage manufacturing jobs in our country. The claim is heard that we are exporting manufacturing jobs to countries with lower wage scales. However, the ‘problem’ is more systemic than that. The USA is not alone in the reduction of manufacturing jobs. Indeed, the speed of this trend is greater in Europe. Furthermore, even China, noted for its low wage scale and standard of living, has lost manufacturing jobs in recent years. The primary cause of decreasing demand for
manufacturing workers is greater productivity through the application of technological innovation.

Even if these displaced workers continue to be employed, they must undergo retraining, perhaps re-education. The short-term consequence is increased stress on workers and their families. The situation can be compared to necessary surgery. Competition may mandate technological innovation, but recovery from the trauma of change can be difficult to say the least. In the transitions, there is opportunity for the Church to reach out to hurting people.

As Wolters points out, world views are core beliefs. All people have them. They are operative whether designers of technologies are aware of it or not. A dangerous world view called “Technopoly” by Postman, “Informationism” by Schultze, and “Technicism” or “Scientism” by Monsma, sees technology not only inevitable, but unquestionably desirable. Scientism maintains faith that whatever problems technologies may create, will be solved by more technological development. An example of this would be the availability of prurient material on the Internet. A technological ‘solution’ is to install filtering software to protect children for being exposed to it. However, children can learn to circumvent filters; libraries refuse to install filters; and those same filters are flawed; they also screen out health-related material which youth need.

Technology is seen as a type of savior. Yet even Negroponte, who is very enthusiastic regarding digital technology, speaks of its dark side: invasion of privacy, theft of data, digital vandalism, intense global competition, etc. Society has special reasons to be concerned about the ethical use of information technology (IT). Many, if
not most, members of our “information age” society have little understanding of how computers work. Computer code is hidden from their view. They have to trust computer programmers to be ethical. Computers are not only powerful, but extremely flexible. For example, they can be programmed to snoop in proprietary databases as well as to maintain inventory records. Furthermore, they are changing the ways in which our businesses and governmental agencies operate. Today on-line banking is optional. Tomorrow it may be mandatory. For several years all employees of the US government have been required to receive their pay by electronic deposit into their bank accounts. And, now, so are employees of Covenant College.

We need to think critically from the perspective of a biblical world view. May we use a particular technology at all? If so, how should we employ it? Those who buy and use technologies can support or discourage types of technological development with the dollars they control.

Third, God was in Christ Jesus reconciling the world to himself (2 Corinthians 5:19). In Christ, we are transformed from God’s enemies into his children. This is the preeminent message of the gospel. There are many corollary ramifications of our salvation.

As Christians, we have gracious promises which are absolutely reliable because of the One who promised. Consider that he will never leave nor forsake us. Even if we walk through the valley of the shadow of death, we have the comfort and assurance of his presence. When we face decisions concerning the development, use, and application of
technology, he will guide us. His wisdom is available for the asking (James 1:5-8), provided we ask in faith.

Many college students, lacking in self-discipline, (Who can say he has enough self-discipline?) have wasted much time surfing the Internet, and visiting in chat rooms to the detriment of their grades. Pray for the gracious conviction of the Holy Spirit for those students, and for others in the fellowship of believers to come alongside, and to hold them accountable. I make it a point to discuss this in class.

The scripture makes it abundantly clear that God is concerned for our earthly life as well as our life beyond physical death. Salvation included deliverance from Pharaoh’s tyranny. God blessed his people with a fertile land, and protection from their enemies. In God’s providence, he blesses and afflicts peoples (Exodus 3:11), and who can deny that he has greatly blessed our nation? Clearly, this is not a nation of Christians; neither is it a new Israel. However, our nation is unique in the history of mankind, and has been used by God to bless other nations, even those with whom we have fought in order to preserve our freedoms.

The Lord, in his providence, has blessed the USA with technological innovation beyond any other. As Christians and citizens, it is incumbent upon us to influence our nation to use its power and hegemony wisely, not only for our own benefit, but also for the betterment of other nations and civilization as we know it. On September eleventh, 2001, a war on terrorism was painfully thrust upon the USA through the misuse of modern technology in the destruction of the World Trade Center towers in New York City. May the Lord grant his people wisdom to influence our nation to use our
technological supremacy for the betterment of mankind even in the midst of this continuing conflict.

Christians live in the blessed hope of the return of our Lord, and establishment of his kingdom on this earth. The earth shall be filled with the glory of God as the waters cover the sea (Numbers 14:21). We already live in the knowledge of his lordship in our lives and in the hope of his reign over all the earth. His providence guides all events, and he assures us that they all work together for our good (Romans 8:28).

Therefore, Christians can be at peace throughout our sojourn on earth even through wars and rumors of wars. We are not to be fearful even though technological innovation seeks to threaten our environment, our way of life, our means of livelihood, or our national security. Rather we are to engage the culture, and seek with all the means entrusted to us to conform the use of technology to his will. And, we live in the blessed hope of his eminent return and the fulfillment of his reign on this earth during which he will be obeyed here as he is in heaven.

III. General Implications of Biblical Perspective for Using Technology

We live in a technological milieu. We depend upon it to awaken us, to prepare our meals, to transport us to work, to communicate with customers, suppliers, co-workers, family and friends, to entertain and inform us, etc. We depend on technology employed by others to supply our food, and other goods and services at lower costs and with greater convenience. Technology makes our lives more pleasant, safe, and productive in ways too numerous to count.
At the same time, there are reasons to be concerned that increased dependence on technology may also have detrimental consequences. For example, Americans are more overweight than ever before in our history. We exercise less and eat more because technology saves us labor, cutting down on physical exercise, and gives us more food at less expense, enabling increased caloric intake.

Consider the automobile. It has changed our society in ways that are beneficial and detrimental. It reduced the filth on our streets created by the horses which were the main mode of transportation, thus enhancing our environment. Now those who do not recall the environmental benefit criticize the automobile for increasing carbon dioxide in our atmosphere by burning hydrocarbons. Some scientists argue that this causes the mean temperature of our atmosphere to increase, and that will have serious deleterious effects on our environment. Many changes enabled by the automobile, such as urban sprawl, were not envisioned by its inventors and developers.

Ford Motor Company and Firestone Tire and Rubber Company have recently and tragically illustrated effects of trade-offs in technology. Ford wanted its Explorer model SUVs to ride more smoothly, so it specified lower tire pressures than Firestone recommended. The result was increased flexing of the side walls of the tires; this flexing caused heat to build up; which, in turn, caused the tires to suddenly fail, cars to turn over, and people to be killed. Each company blamed the other, and a close, 100 year long corporate alliance was fractured.

Microsoft is criticized by many for failing its trade-off tests. Users of its Windows operating systems and Office productivity software are frequently inconvenienced (to put
it mildly) by breaches of security. There is a trade-off between making these programs convenient to use and secure. There is also a trade-off between shipping them sooner, and realizing profit from sales; and continuing development to reduce bugs and to make them more secure. Many users and the federal Justice Department have concluded Microsoft is overly concerned with profits.

The lesson here is that we must examine technology, and not just accept it uncritically because it promises us more comfort and prosperity. Some Christians place stringent limits on their use of technology. The Amish use tractors, but not autos. All of us do well to discipline ourselves in the use of technology even in small matters such as more often climbing or descending the stairs rather than riding the elevator.

Computers grow more and more ubiquitous. Not only have they replaced earlier forms of technology such as slide rules, calculators, typewriters, and computer terminals, but microprocessors are found in automobiles (for diagnostics, determining location, and communication), CD players, cell phones, microwave ovens, digital cameras, and may other products we use regularly. If we are to live and function in our fast-paced society, learning to wisely use and to moderate our use of these devices is essential if we are to maintain Christian perspective and quality of life.

One consideration of using a computer attached to a network is security. Users have a responsibility to the organization which owns the network, to others who also use the network, and to others concerning whom data is stored on the network. If a careless user allows unauthorized persons to access a network, proprietary data can be stolen; confidential records can be compromised. This can hurt organizations and individuals.
One of the fastest growing crimes in this ‘information age’ is identity theft. With computer access, thieves can get enough data on real people to misuse their credit card numbers, open new financial accounts in their names, and secure loans. This can cause them financial loss as well as great expense in legal fees to reclaim their identities, and can ruin their credit ratings for years to come. So all authorized users of networks have responsibility for the security of the data on that network.

In addition to using IT responsibly, it is important to use it moderately. The Internet can be seductive. Many have gotten ‘hooked’ on using the Internet. In addition to pornography, people get caught up in gambling, shopping, chatting, gaming, and just browsing on the ‘Net.’ Overuse of the Internet to the neglect of their studies is a primary cause of students performing poorly academically. Christians need to be sure their time spent on the Internet is not taking them away from the time and attention they need to pay to their devotional, work, and family responsibilities.

Network technology enables workers to telecommute. Many employees and contract workers work at home. Many regularly take work home from the office. The ability to work anywhere means, for some, that they work everywhere, and work many hours that infringe on time with families, even during vacations. This is another area in which self-discipline should be exercised so that familial and other responsibilities are not short-changed.

Legislators and law-enforcement agencies are constantly behind when it comes to regulating new technologies. They cannot write and enforce rules concerning technologies which have not yet been introduced. There is a constant need to consider
whether and how to regulate new technologies. As citizens, we have a responsibility to become informed about technological changes and the concerns they engender.

To facilitate its growth, the US Congress had prohibited taxing internet commerce for five years. That period has expired. In this time in which many states are experiencing budget shortfalls, there is great pressure to collect sales taxes on on-line transactions. The loss of sales tax revenue in Tennessee to the state and local governments is projected to 300 million dollars in 2004. ‘Bricks and mortar’ merchants complain that the absence of sales tax on Internet transactions puts them at an unfair disadvantage. The US Supreme Court has ruled that sales tax could not be collected because of the complexity of the myriad of sales tax regulations. Consequently, thirty-seven states agreed to simplify and unify their sales tax structures. Tennessee is one of twenty states in which the legislatures have agreed on a uniform sales tax structure, and expects to begin collecting sales taxes on Internet and catalog sales in 2005.

Unsolicited faxing has been declared illegal, because it consumes supplies of the recipients without their prior knowledge and consent. Just as we recently instituted a national ‘do-not-call’ list limiting telemarketers, now some states and the US government are seeking to ban or regulate ‘spam,’ unsolicited e-mail advertising. However, this is very difficult to regulate because of the international reach of the Internet. One suggested solution is to begin charging for electronic mail. If even one cent were charged per e-mail sent, many spammers would desist as they send out millions of e-mails, and their costs would be enormous.
Encryption technology has long been regulated in the same category as munitions. To export encryption technology is a federal offense punishable by several years in prison. Recently Phil Zimmerman created a cryptographic computer program called Pretty Good Privacy (PGP), and posted it on the MIT web-site. Within the day in which it was posted, PGP was downloaded overseas. This set off a controversy as to whether Zimmerman should be prosecuted, and how this new technology might be regulated. Jim Kalstrom, the FBI Bureau Chief in NYC, advocated requiring PGP’s keys to be placed in escrow. Then, with a court order, suspected felons’ e-mail correspondence could be decoded. PGP could be a boon to Christian missionaries serving in sensitive areas. If restrictive regimes insisted on having the keys, the ‘boon’ would become a boondoggle.

The above examples serve as a sample to illustrate the concerns our society has about regulating new technology. Human cloning would be another vital concern. We, as Christian citizens have an important role to play and a responsibility to be engaged in their resolution. As a minimum, we need to be informed, and to pray for our leaders.

IT is also used by many church and denominational offices. It helps with communication within the body of Christ, especially in keeping in touch with those who serve abroad. In some congregations, it is used in worship services to project the words of hymns and Bible passages. In using IT during worship services Christians need to exercise caution, that it not become the focus, and distract from the essence of worship, acknowledging the worth of the Lord Jesus. Professor Quentin Schulte, of Calvin College, argues that, in worship, technology should be of high quality and invisible. (I would say transparent.)
IV. Role-Specific Implications of Biblical Perspective for Using Technology

Academia has special concerns in the use of IT. Students are notorious for procrastination. The Internet provides many distractions from pursuit of studies. One distraction that particularly appeals to young adults is music. Our military academies are serious about enforcing ethical conduct. Recently one hundred cadets at the US Naval Academy had their computers confiscated because they were downloading music from the Internet thereby avoiding paying royalties. The USNA is not unique; the problem is great in virtually all colleges and universities. The provision of broadband networks by the educational institutions facilitates the downloading and swapping of music files. These files are large, and swapping them over dial-up connections would be very slow. Many Christian college students rationalize this behavior, and maintain that anything on the Internet must be free.

Another strong temptation for college students is to use the Internet for obtaining papers and articles from which they can copy portions, or even turn in entire papers as their own work, i.e. plagiarize. There are web sites which sell papers suitable for such deception. Some professors have created software to try to identify plagiarized material. The Internet can certainly be used to find material to be referenced, but there is a fine line between using ideas, and copying material without making clear that it is being quoted with proper referencing.

Many universities are offering courses, and even degrees, via ‘distance learning.’ This causes us to rethink the essence of higher education. Much of the quality of education is derived from discussions in classrooms and other settings. Education is more
than the impartation of information. Ideas must be examined and discussed to be integrated into one’s frame of reference, or world view. Discussing the material provides clarification and reinforcement. As Neil Postman points out, the ultimate in distance learning is to read a book. One thereby overcomes not only the barrier of space, but of time as well.

In addition, schools of all ranks, including Covenant College, are installing technological aids in ‘smart classrooms.’ Just as in churches, care must be exercised to keep the technology transparent to the material being presented. It can easily become distracting because of poor quality or malfunctions. Overuse causes students to be more attentive to the displays than to the instructor. My practice is to use technology extensively in labs, and sparingly in lectures.

Other fields have ethical concerns regarding technology in general and information technology in particular. For example, IT is used extensively in the medical profession. Hospital information systems increase accuracy and decrease errors. They make patient records available to doctors and other authorized users wherever they may be. Thus doctors may review patients’ records from their homes or offices before ordering additions or adjustments to patients’ medications.

Naturally, security of these records is extremely important. Potential employers, if they were privy to applicants’ medical records could use them to discriminate. There is currently a controversy concerning disclosure of the medical records of Rush Limbaugh, a popular radio talk-show personality, to the prosecutor’s office in Palm Beach County, Florida, and by that office to the media, and, hence, to the public.
CAT and MMI scanners are heavily dependent on IT. These marvelous devices facilitate diagnoses of diseases. A controversy arises from their expense. Hospitals compete with each other. If, for example, Memorial Hospital should have these, Erlanger would want them also in order to attract patients. There are very costly, over a million dollars each. Having more of these, with excess capacity, in an area can needlessly drive up the cost of medical care. Some of our graduates may, because of their professional callings have to participate in such decisions with ethical consequences.

Majors in Information and Computer Sciences can expect to participate in such decisions regularly. Naturally, technicians would like to have the latest cutting-edge technology for their use. IT is the largest capital expenditure of many businesses and non-profit organizations. Technical staffs have great influence in the process of deciding to acquire computer hardware and software. Moderation and stewardship need to be important considerations in such decisions.

Change comes rapidly and continuously to Information and Computer Sciences (ICS). Part of my calling as a professor of ICS is to study innovations in the technology and in practices in ICS, to encourage students who major in ICS to stay current, and to focus, not just on the technology, but also on its applications and purposes. In addition, they must study the organization they serve and its needs, personnel, and resources. They must think critically to justify technological investments and their ethical employment.

I teach Systems Analysis and Database Concepts. These courses help to prepare students to become systems analysts. Not only must they learn to adapt to frequent
change, but to become agents of change as well. There are several reasons why systems analysts are change agents in the organizations that employ them.

First, the technology changes rapidly, and business processes must be adapted to utilize the new computer hardware and software. This is not optional in the long term because manufacturers and software writers discontinue support for previous technologies after the new ones have gotten into common use. This may only be a matter of several months to two years. The speed of computer processors has doubled every 18 months for several years. In 1990, my new computer operated at 50 million cycles per second; the computer I use to write this paper operates at more than 2.5 billion cycles per second. That’s a fifty-fold increase in speed in just twelve years. Operating systems and application software must be modified to take advantage of these increases in processor speed.

Second, the new technologies enable businesses to function in ways that previously were impossible or impractical. Computers employ solid-state technology. Therefore, they are very reliable and long-lasting. Part of their reliability is dependent on software and networking. When the World Trade Center went down on September 11, 2001, the central computers of American Express were destroyed. They served ten thousand agents in the field. Fortunately, American Express had a shadow installation in Arizona which was continuously updated. Within four hours, the agents were back on line. Like many businesses, American Express could not function without its computers. No doubt, the back-up facilities maintain by American Express seemed very expensive until they were needed. But, responsible thought for continued service to customers paid-off handsomely.
Computers are so reliable, that many users become careless in backing up files. This makes them vulnerable to loss in the event of power outages, and other technical difficulties. Software performs consistently once its ‘bugs’ have been work out. Therefore, some may question the need to adapt innovations in information technology. I used the word must in this regard above not only because of the need for ongoing technical support, but also because of opportunity costs. Businesses and non-profit organizations put themselves at competitive disadvantage by foregoing technological advances which save labor and other resources.

Furthermore, technological advances enable users to do things that they could not previously do. For example, the Japanese have recently built a super-computer that is more than four-and-one-half times faster than any previously built. It can execute nearly thirty-six trillion floating-point operations per second. They hope to use it to forecast weather and climate changes. Previous systems divided the surface of the earth in a grid of squares with sides thirty-six miles long. Because of the speed of the new machine, the sides of the squares can be reduced to six miles. This increases the number of squares thirty-six times. Thus the accuracy and reliability of the forecasts promises to be much greater. This gainsays Thoreau’s dictum that improvements in technology are merely improved means to unimproved ends. The end product of this climate computer is expected to be vastly superior.

Those who refuse to adopt the new technologies will miss opportunities to fulfill their callings in new ways. Consider the benefits of advances in communications technologies that Christian mission organizations now enjoy.
Third, organizations usually start with some applications, such as corporate accounting, and systematically convert others e.g., payroll, order entry, inventory control, etc., as they are able. Typically, systems analysts must operate within constraints of their organization’s technical capability, limited financial resources, political considerations, governmental directives, and time.

Fourth, many organizations have decided to redesign their procedures in order to meet the challenges of competition. This is referred to as business process redesign (or reengineering) (BPR). The “Y2K” concern acted as a catalyst to accelerate this practice. In the decade of the 1990s, when faced with the prospect of major reprogramming effort to incorporate four digits for the year in all date fields, many chief information officers used the occasion to do a thorough redesign of their procedures, and reported significant increases in productivity. This further popularized BPR. Systems analysts are often the most knowledgeable employees in the organization with regard to the capabilities and limitations of the available technology. In addition, they are experienced in analyzing the needs of the business. Therefore, it regularly falls to them to redesign the businesses processes.

Being change agents presents challenges to our graduates. Frequently other employees do not welcome change. Fallen humans may resent being told how to do their jobs. Some older employees may resent younger analysts instructing them. (What an advantage to have Paul’s encouragement not to let others despise you because of your youth! (1 Timothy 4:12) (Technical competence and a humble spirit (Galatians 5:22-23) can go far to allay this resistance.) Some employees have given only token cooperation;
some have knowingly given misinformation. Some employees have deliberately sabotaged new systems by simply not following instructions.

Scripture admonishes us to be wise as serpents, and innocent as doves. (Matthew 10:16) As a Christian professor in ICS, part of my task is to make the students aware of the challenges which await them. Therefore, I assign readings which incorporate scenarios drawn from organizational politics and discussion of these issues. I am careful to include biblical ethics in these discussions.

The above discussion applies not only to Systems Analysis and Database Design, but also to other courses which I teach at Covenant College: Management Information Systems, and Accounting Information Systems. All large accounting firms also offer consulting services concerning business processes, and some of our graduates may well serve in these advisory positions.

Professional societies such as the Association of Information Technology Professionals (AITP), of which I am a member, and the Association for Computing Machinery (ACM) do have published ethical guidelines. Randy Smith serves as faculty advisor to the student chapter of the ACM at Covenant College. The AITP code of ethics is included in appendix A. The ACM code is much longer, and is found at the following website: http://www.acm.org/constitution/code.html. Also, there is a Computer Ethics Institute, in Washington, DC, which has published its “Ten Commandments of Computer Ethics,” which is included as appendix B.

Systems analysts study current systems to determine their essential functions; then design more efficient and effective ways to do this work. The criteria of efficiency and
effectiveness are consistent with Biblical principles. Efficiency correlates with stewardship by conserving resources. Employees may be criticized for going over budget; they may be fired for not getting the job done (being ineffective). As the Lord calls us to serve him in various areas, we are to reflect his character. It is consistent to ask him to equip us to complete the tasks we’re assigned. It would also be honest to express reservations if we were asked to do work for which we were not qualified.

Scripture teaches, and experience confirms, that God’s work assignments are fulfilling and rewarding. (Psalm 37:4) He equips believers for specific tasks, and assigns tasks to specific believers. The Bible is full of examples of God directing his people to specific assignments and enabling them to fulfill those responsibilities. The call of Moses is a striking example. In Exodus 3 & 4 we read how God called Moses to be his spokesman despite his speech impediment. Later in Exodus, we read how Moses was enabled to lead the Israelites out of bondage in Egypt. Other, perhaps more relevant and mundane, examples are found in the account in Exodus 28, 35 & 36. God gifted tailors to make the priestly garments, chose and equipped Bazalel, of the tribe of Judah, and other craftsmen for constructing the Tabernacle, Israel’s house of worship during the wilderness wandering.

Therefore, although God’s providence may place us in situations needing great wisdom, beyond our own, we need to accept the place of service he has ordained for us. We need to trust that he will equip and enable us to faithfully serve and honor him in those situations. Indeed, he will enable us to glorify and enjoy him there.
Summary

As Christians, we are motivated by allegiance to Jesus Christ. We are guided by his word, the Bible. We see our place in history and society through his perspective.

(Romans 12:1-2)

Technology is a result of the creativity with which God has endowed us creatures made in his image. We receive its blessings and the accompanying responsibilities. At the same time, we are to enjoy his technological blessings, and to steward them responsibly. This involves using them to benefit others in keeping with his character who sends rain on both the just and the unjust. This is a precarious business, as we ourselves are both unjust and justified. We are constantly dependent on him to enable us to honor him as we seek to walk in faithfulness to him. Our trust is not in the technologies, which are created through fallible, distorted image-bearers, but in their ultimate Giver.

Competition motivates businesses and non-profit organizations to become increasingly efficient and to develop distinctive competencies. Striving to be good stewards of resources and to be excellent in what we do are consistent with a Biblical world-view. In addition, moderation in the use of technology and the pursuit of other Biblical ethics such as the Golden Rule, being generous, etc. is incumbent upon the Christian.

Our assurance of God’s sovereignty comforts us that his control is sure. As we seek the Lord’s wisdom for our decisions, we must be open to the gracious conviction of the Holy Spirit concerning our stewardship of technologies. We must be humble before him if we hope to receive his wisdom. Our faith relationship with the Lord requires us to
maintain commitment to him and to continue in awareness of our dependence upon him. We must repent quickly as he shows us how we have acted unfaithfully or failed to act faithfully. We must promptly respond in obedience when he shows us opportunities to advance his agenda. Thus we glorify him on earth. Thus we live in the joy of fellowship with him.

I believe that our primary focus as followers of Jesus needs to be on Him, not another code of ethics. In his talk at Calvin College in January of 1998, Neal Postman sited wise men of the past such as the prophet Micah, Buddha, Thoreau, and Jesus. He said they spoke wisely to their contemporary situations. He went on to say that we have to work out appropriate responses to new technologies without their present aid. I strongly take issue with Postman’s assertion that Jesus’ disciples must do without his guidance in our present situations. We have the Bible, the inspired word of God, inspired by the Holy Spirit who is one with Jesus. In it we find commandments and principles to guide our thoughts, and transform our minds. We have the fellowship of believers in which we find more mature believers to help us sort out options, and examine our own motives. In this fellowship we also have younger Christians who cause us to rethink issues, and brethren to share our concerns and joys. We have the presence of the Spirit of God to convict us of wrong motives, attitudes, words and actions, and bring us back to restored fellowship with almighty God.

Thus, while previously cited codes of ethics often seek to be based on Biblical principals, and some are, they are not all we have available to us. We have the privilege of living in relationship with God. He has ordained channels by which his grace and guidance come to us. As reformed Christians we trust his providence to meet us in our
present situations, and to give us insights as we need them. We walk in faith that he will
never leave us or forsake us. This is what I would most like to communicate to my
students. I pray that they may glorify him by manifesting his presence in their workplaces
and homes. I desire that they may enjoy him above all else.
Appendix A: AITP Code of Ethics

Code of Ethics

I acknowledge:

That I have an obligation to management, therefore, I shall promote the understanding of information processing methods and procedures to management using every resource at my command.

That I have an obligation to my fellow members, therefore, I shall uphold the high ideals of AITP as outlined in the Association Bylaws. Further, I shall cooperate with my fellow members and shall treat them with honesty and respect at all times.

That I have an obligation to society and will participate to the best of my ability in the dissemination of knowledge pertaining to the general development and understanding of information processing. Further, I shall not use knowledge of a confidential nature to further my personal interest, nor shall I violate the privacy and confidentiality of information entrusted to me or to which I may gain access.

That I have an obligation to my College or University, therefore, I shall uphold its ethical and moral principles.

That I have an obligation to my employer whose trust I hold, therefore, I shall endeavor to discharge this obligation to the best of my ability, to guard my employer's interests, and to advise him or her wisely and honestly.

That I have an obligation to my country, therefore, in my personal, business, and social contacts, I shall uphold my nation and shall honor the chosen way of life of my fellow citizens.

I accept these obligations as a personal responsibility and as a member of this Association. I shall actively discharge these obligations and I dedicate myself to that end.

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Appendix B

Ten Commandments Of Computer Ethics

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1. Thou Shalt Not Use A Computer To Harm Other People.
2. Thou Shalt Not Interfere With Other People’s Computer Work.
3. Thou Shalt Not Snoop Around In Other People’s Computer Files.
5. Thou Shalt Not Use A Computer To Bear False Witness.
6. Thou Shalt Not Copy Or Use Proprietary Software For Which You have Not Paid.
7. Thou Shalt Not Use Other People’s Computer Resources Without Authorization Or Proper Compensation.
8. Thou Shalt Not Appropriate Other People’s Intellectual Output.
9. Thou Shalt Think About The Social Consequences Of The Program You Are Writing Or The System You Are Designing.
10. Thou Shalt Always Use A Computer In Ways That Insure Consideration And Respect For Your Fellow Humans.

To request the Ten Commandments of Computer Ethics in PDF format please e-mail us with your name, e-mail address and affiliation at cei@brookings.edu.

The Ten Commandments of Computer Ethics were first presented in Dr. Ramon C. Barquin’s paper, “In Pursuit of a 'Ten Commandments' for Computer Ethics.”
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