

**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF NEW YORK**

UNITED STATES OF AMERICA,
Plaintiff

**DECLARATION OF
TERESA A. HOMMEL**

v

Case No. 06-CV-0263
(GLS)

NEW YORK STATE BOARD OF ELECTIONS;
PETER KOSINSKI and STANLEY L. ZALEN,
Co-Executive Directors of the New York State
Board of Elections, in their official capacities; and,
STATE OF NEW YORK,
Defendants

Pursuant to 28 U.S.C. sec 1746, **TERESA A. HOMMEL**, declares as follows:

1. Since June, 2003, I have been a full-time activist for election integrity. My goal has been to inform legislators and other decision-makers and the public about the dangers of Direct Recording Electronic voting machines (“DREs”) and to prevent DREs from being acquired by New York State in its effort to comply with the Help America Vote Act of 2002 (“HAVA”).
2. My expertise in computers is a result of my 40-year career as a computer professional. I have worked as a computer programmer, marketing representative for a major computer hardware and software corporation, technical writer, and instructor in various colleges, universities and corporations. I have published two books with John

Wiley & Sons, Inc.: OS/JCL Study Guide, 1982, and Structured COBOL Programming Study Guide, 1984. Since 1983 I have been a corporate trainer performing short-term contracts. I have worked for clients in areas such as airlines, banking, computer hardware and software, construction, education, finance, governmental agencies at the city, state, and federal level including the Department of Defense, insurance, manufacturing, pedigreed pets, publishing, retail (department stores, drug stores and mail order), steel and telephone.

3. In July, 2003, I created the "Fraudulent Voting Machine," a computer program that simulates a DRE without a paper trail. After leading computer scientists urged me to make it available on the internet I created the web site www.wheresthepaper.org to display it. Based on emails I have received, the Fraudulent Voting Machine is used internationally to demonstrate the vulnerability of the vote when handled by DREs.
4. I have maintained WheresThePaper.org as an online library of documents on electronic voting. For example, the U.S. Department of Justice cited a document on my web site in paragraph 6 of the Declaration of Brian F. Heffernan executed November 5, 2007.
5. I was the primary citizen advocate for New York City Council Resolution 228-A, which had 43 bipartisan sponsors out of 51 council members and passed unanimously on August 16, 2006.¹ Resolution 228-A urged that new voting equipment acquired by New York City be able to be publicly inspected and confirmed to be correctly

¹ Information about Res. 228-A: <http://www.wheresthepaper.org/ny.html#CCreso228>
My statement at the press conference for Res. 228-A: <http://www.wheresthepaper.org/TeresaHommel060816.htm>

configured, to consist of exactly the same components as the system of that type that was certified for use in New York State, and to contain no illegal communications components that would allow tampering through the use of wireless communications.

6. I was the primary citizen advocate for New York City Council Resolution 131-A, which had 43 bipartisan sponsors out of 51 council members and passed unanimously on March 14, 2007.² Resolution 131-A urged the Board of Elections in New York City to select a precinct-based optical scan system rather than a DRE system as the new voting equipment for New York City. Resolution 131-A listed the advantages of optical scan systems and disadvantages of DRE systems.
7. I have testified at hearings before governmental bodies such as the New York State Task Force on HAVA Implementation on July 10, 2003³; Connecticut General Assembly's Government Administration and Elections Committee in February, 2004; New York State Assembly Election Law Committee on December 20, 2004⁴; New York City Mayor Bloomberg's Mayor's Election Modernization Task Force on May 4, 2005⁵; U.S. Election Assistance Commission on June 30, 2005⁶; New York State Assembly's Election Law Committee on December 13, 2005⁷; Suffolk County, New

² Information about Resolution 131-A: <http://www.wheresthepaper.org/ny.html#CCreso131>
My statement at the press conference for Res. 131-A: <http://www.wheresthepaper.org/TeresaHommel070314.htm>

³ Testimony of July 10, 2003: http://www.wheresthepaper.org/testimonyJuly10_03.htm

⁴ Testimony of December 20, 2004: <http://www.wheresthepaper.org/ElectionLawDec20.htm>

⁵ Testimony of May 4, 2005: http://www.wheresthepaper.org/MayorsTaskForce05_04TeresaHommel.htm

⁶ Testimony of June 30, 2005: http://www.wheresthepaper.org/testimony06_30_05.htm

⁷ Testimony of December 13, 2005: http://www.wheresthepaper.org/Testimony12_13TeresaHommel.htm

York, Legislature's Ways and Means Committee on March 9, 2006⁸; and the Board of Elections in the City of New York on November 21, 2006 and January 23, 2007⁹.

8. I have testified before the New York City Council's Governmental Operations Committee on October 18, 2004; September 23, 2005; November 21, 2005; February 27, 2006; March 7, 2006; April 24, 2006; June 26, 2006; October 4, 2006; January 29, 2007 (Joint Hearing with the Technology in Government Committee); and November 13, 2007¹⁰.
9. I have addressed conferences such as the Workshop on Voter Verified Election Systems sponsored by the US Public Policy Committee of the Association for Computing Machinery (USACM) in Denver, Colorado in July, 2003; the 2004 Communications Workers of America National Legislative/Political Conference in Washington D.C. on March 28, 2004; the Urban Ministries Conference of the Unitarian Universalist Association in Boston, Massachusetts on March 20, 2004; a forum called New Standards for Elections: A Forum on Technical and Nontechnical Requirements for Voting Systems at the Radcliffe Institute for Advanced Study,

⁸ Testimony of March 9, 2006: http://www.wheresthepaper.org/TeresaHommelMarch9_06Mod.htm

⁹ Testimony of November 21, 2006: <http://www.wheresthepaper.org/TeresaHommel061121.htm>

Testimony of January 23, 2007: <http://www.wheresthepaper.org/TeresaHommel070123.htm>

¹⁰ Testimony of October 18, 2004: http://www.wheresthepaper.org/NYCChearing10_18.htm

Testimony of September 23, 2005: http://www.wheresthepaper.org/TeresaHommel09_23Testimony.htm

Testimony of November 21, 2005: http://www.wheresthepaper.org/TeresaHommel11_21Testimony.htm

Testimony of February 27, 2006: <http://www.wheresthepaper.org/TeresaHommel060227GovOps.htm>

Testimony of March 7, 2006: <http://www.wheresthepaper.org/TeresaHommel060307GovOps.htm>

Testimony of April 24, 2006: <http://www.wheresthepaper.org/TeresaHommel060424.htm>

Testimony of June 26, 2006: <http://www.wheresthepaper.org/TeresaHommelTestimony060626.htm>

Testimony of October 4, 2006: <http://www.wheresthepaper.org/TeresaHommelTestimony061004.htm>

Testimony of January 29, 2007: <http://www.wheresthepaper.org/TeresaHommel070129.htm>

Testimony of November 13, 2007: <http://www.wheresthepaper.org/TeresaHommel071113.htm>

Harvard University, Feb. 12, 2005¹¹: four public forums held by the Coalition for Voting Integrity in Bucks County, Pennsylvania on June 27, 2005, and later dates¹²; several caucuses at the League of Women Voters National Conventions in June, 2004, in Washington D.C. and June, 2006, in Minneapolis, Minnesota¹³; and a forum at Cardozo School of Law on January 31, 2007¹⁴.

10. I wrote articles on electronic voting for the September, 2003, newsletter of the New York Women's Bar Association¹⁵; and the September, 2003, newsletter of the Sierra Club New York City Group.

11. I wrote an article about my work called "Don't Hand Democracy Over to Computers" for the Unitarian Universalist Association of Congregations' November/December 2004 issue of UU World magazine¹⁶.

12. My work was profiled in "Among Our Key People" in The Phi Beta Kappa Society's Spring, 2004, issue of The Key Reporter¹⁷; and in the Village Voice, July 21-27, 2004¹⁸.

13. I have addressed public events such as the Rally for Voter-Verified Paper Audit Trails in Albany, New York, on July 13, 2004¹⁹; the press conference on proposed voting

¹¹ Remarks of February 12, 2005: http://www.wheresthepaper.org/RadcliffeFeb12_2005_TeresaHommel.htm
Forum web site: <http://www.evotemass.org/>

¹² News report of Bucks County, Pennsylvania, June 27, 2005 event:
http://www.zwire.com/site/news.cfm?newsid=14811298&BRD=1686&PAG=461&dept_id=41297&rfti=6

¹³ Remarks to League of Women Voters Caucus on June 10, 2006:
<http://www.wheresthepaper.org/LWVUS060610Caucus.htm>

¹⁴ Remarks of January 31, 2007: <http://www.wheresthepaper.org/TeresaHommel070131.htm>

¹⁵ Article in New York Women's Bar Association newsletter: <http://www.wheresthepaper.org/NYWBAarticle.pdf>

¹⁶ "Don't Hand Democracy Over to Computers" <http://www.uuworld.org/2004/06/forum.html>

¹⁷ The Key Reporter, Spring, 2004: <http://www.wheresthepaper.org/TheKeyReporterSpring2004.pdf>

¹⁸ Village Voice, July 21-27, 2004: <http://www.villagevoice.com/issues/0429/fahim.php>

¹⁹ Statement to rally, July 13, 2004: <http://www.wheresthepaper.org/July13TAH.htm>

systems in Brooklyn, New York, held by State Senator Velmanette Montgomery on November 13, 2006²⁰; and the press conference held by the New York Public Interest Research Group (NYPIRG) on Nov. 29, 2007, to announce that over 100 professors from New York State universities and colleges are calling for optical scan systems rather than DREs to replace our current lever voting machines.

14. I submitted comments including proposed language for escrow provisions to the New York State Board of Elections on the first draft Voting System Standards on December 20, 2005, and again on January 22, 2006²¹.

15. I submitted statements for the official record to committees of the U.S. Congress on legislation concerning voting systems: "Limitations of Certification Testing, "Transparency," and Current Standards and What Congress Can Do" to the U.S. House of Representatives Committee on Oversight and Government Reform, Subcommittee on Information Policy, Census, and National Archives, at their Field Hearing in New York City, May 7, 2007²²; and a statement for the hearing on S. 1487 held by the U.S. Senate Rules and Administration Committee held on July 25, 2007²³.

16. I authored the paper "Election Fraud in America: Don't worry about Paper Ballots-- The Problem is Secret Procedures and Lack of Observers!" on June 28, 2007²⁴, after several months' study of the history of election fraud in the United States.

²⁰ Statement at press conference, November 13, 2006: <http://www.wheresthepaper.org/TeresaHommel061113.htm>

²¹ Comments on draft Voting System Standards: <http://www.wheresthepaper.org/TeresaHommelDec20.htm> and <http://www.wheresthepaper.org/NYSvotingSysStdsTestimony060122.htm>

²² Statement of May 7, 2007: <http://www.wheresthepaper.org/TeresaHommelStatement070507.htm>

²³ Statement of July 25, 2007: <http://www.wheresthepaper.org/TeresaHommel070725HearS1487.htm>

²⁴ "Election Fraud in America: Don't worry about Paper Ballots--The Problem is Secret Procedures and Lack of Observers!" http://www.wheresthepaper.org/ElectionFraud_DontWorryAboutPaperBallots.htm

17. The history of American election fraud reveals that citizen oversight is the key requirement for achieving legitimacy of elections and our government. If vote handling and counting are conducted in secret, we cannot know whether an election is honest and whether voters have selected the winners. It is well accepted that government behind locked doors is typically corrupt. Democracy requires citizens to do more than just vote, we must participate in elections by performing and observing the work including all handling of votes.
18. DREs, with or without a voter-verified paper audit trail ("VVPAT"), eliminate all opportunity for citizens to observe and understand how votes are handled and counted. Individual voters cannot witness their own votes and know whether they were recorded and cast as intended. Election observers cannot witness the storage, handling, and counting of votes sufficient to attest that these procedures were properly and honestly conducted.
19. New York law requires DREs to print a VVPAT. VVPAT is a small strip of paper, similar to a cash register receipt; it lists the voter's choices for voter verification prior to casting the ballot. VVPAT, when the concept was originally introduced, was intended to serve as the legal ballot to be counted on election night to determine tallies, and to be recounted for verification. In this concept, the computerized voting machine serves as a ballot printer and ballot box. Even though voters use a computer rather than a pencil to mark their ballot, opportunity to observe is preserved because the votes are on paper; all procedures with the votes are observable and

understandable to the average citizen. The VVPAT concept has failed in practice, however:

- a. Lost opportunity to observe the vote: In jurisdictions where VVPAT is required, it has been implemented in law and practice in a way that eliminates citizens' opportunity to observe. When DREs are used, with or without VVPAT, the tallies announced on election night are the tallies printed out by the DRE. The public is urged to believe that such tallies are derived from votes accurately recorded in the internal electronic circuits of the computer, but neither voters nor observers can ever witness the accuracy of such recorded votes, nor their counting. Using DRE tallies in this way relegates VVPAT to serving as a placebo for voters, and a record a tiny percentage of which may be spot-checked after the election.
- b. Unfeasibility of auditing DRE tallies by counting the votes on VVPAT:
"Auditing" is any procedure that confirms conclusively that the results of normal computer operation are accurate, or identifies the inaccuracies in need of correction. The original concept of VVPAT assumed that jurisdictions would confirm election night tallies by recounting the votes on VVPAT. This idea has been rejected by all jurisdictions on the basis that such recounting requires too much time and is too burdensome to be accepted as a routine practice. For example, examination of the VVPAT has been done to study the election process and not to determine whether announced election outcomes accurately reflected

the will of the voters²⁵. The smallness of discrepancies found in the few examinations that have been done is not reassuring because a study published in The Communications of the ACM has shown that by shifting even one vote per machine, a tamperer can change the outcome of elections.²⁶ Moreover, despite the fact that printing technology has reached near perfection over the last hundred years, vendors of DREs have delivered such shoddy printers and designed the integration of the printer into the DRE in such a faulty way that the rate of spoiled VVPAT is as high as twenty percent.²⁷

- c. Unwillingness to audit computer function: VVPAT was originally intended to enable jurisdictions to audit their computers' functionality and to confirm that the computers have functioned accurately. This type of computer audit has been rejected by election professionals. According to Doug Lewis of The Election Center in testimony to Congress, election professionals do not believe they should have to confirm that their computers are working accurately; they wish to simply assume it.²⁸
- d. The assumption that computers work accurately and do not need to be audited is unique to the field of elections. It is also bizarre, given the huge number of documented failures of electronic voting systems.²⁹ No organization for which I

²⁵ For example: http://www.wheresthepaper.org/cuyahoga_2006_audit_rpt.pdf

²⁶ Study published in The Communications of the ACM: <http://www.wheresthepaper.org/ACM.pdf>

²⁷ Twenty percent of the VVPAT was unreadable after a recent election in Ohio:

http://www.wheresthepaper.org/PlainDealer071128_20PercentElectionPrintoutsUnreadable.htm

²⁸ Doug Lewis testimony: http://www.wheresthepaper.org/HouseAdminTestimonyDougLewis3_20_2007.pdf

²⁹ Documentation of machine malfunctions: <http://www.votersunite.org/info/messupsbyvendor.asp> and <http://www.votersunite.org/electionproblems.asp>

have worked in forty years has assumed that its computers are working accurately and are free from both innocent mistakes in design and programming as well as malicious security intrusions. Auditing to confirm that computers are working accurately is routine in the computer industry for good reason. Cringely reported that in a typical year 72% of computer software projects were complete or partial failures, which means that the systems didn't work.³⁰ An internet search for information on "ATM Fraud" yields well over a million entries. The FBI Computer Crime Survey of 2005 reported that in the one year they studied, 87 percent of organizations had security incidents, 64 percent lost money as a result (showing that the incident was not trivial), and 44 percent had intrusions from within their own organization.³¹ Computer systems used in elections would be less secure, given that election professionals are typically not savvy about computers or computer security, there is high motivation to cheat, the likelihood of discovery is minimal, and one person with brief access to a system could alter all tallies.

20. Acceptance of DREs may be based on the erroneous perception that they are merely new versions of the familiar lever voting machine. Lever voting machines are Direct Recording Mechanical ("DRM"). New York State has used DRMs for over 100 years with relatively little trouble. DRMs differ from DREs, however, in ways that enable

³⁰ "No Confidence Vote: Why the Current Touch Screen Voting Fiasco Was Pretty Much Inevitable" by Robert X. Cringely, December 4, 2003: <http://www.pbs.org/cringely/pulpit/pulpit20031204.html>

³¹ FBI press release of January 19, 2006: <http://houston.fbi.gov/pressrel/2006/ho011906.htm>
Survey: <http://www.digitalriver.com/v2.0-img/operations/naievigi/site/media/pdf/FBIccs2005.pdf>

DRMs to comply with citizens' right and responsibility to oversee elections while DREs cannot.

- a. DRMs enable meaningful observation: With DRMs the opportunity to observe how votes are handled and counted takes place in the voting machine warehouse. The number of citizens who can observe is restricted to candidates and a small number of their representatives. These individuals are allowed to attend Logic and Accuracy Tests at the warehouse and inspect the machines. Because DRMs are mechanical, once they have been programmed for a ballot, they cannot change themselves. The programming demonstrated during pre-election tests is reliable to demonstrate how a machine will work on election day, barring tampering. (Both DRE and DRM equipment can be damaged, so denial of service to voters due to damaged equipment is not a way in which these types of equipment differ.) In the history of using DRMs, tampering has been minimal due to the difficulty of accomplishing it -- once these mechanical machines are programmed and locked, it is difficult and time-consuming to modify them. A tamperer would have to gain access to the machines for an extended period of hours to modify even one of them. These characteristics of DRMs mean that DRMs are stable and manageable.
- b. Computers prevent meaningful observation: Computers are volatile and unmanageable -- they can change their own programming, and their programming and data can be changed in seconds by persons who need not gain physical access to the equipment. One person can change the programming in thousands of DREs

in a short time. Because of computer volatility, no tests with DREs, including certification tests and pre-election Logic and Accuracy Tests, are reliable to demonstrate how a DRE will work on election day. Therefore the opportunity to observe such tests, whether allowed to all citizens or only to candidates and their representatives, does provide opportunity to witness how votes will be handled and counted.

(1) Computers can alter their own programming: When I began working as a computer programmer in 1967, the use of programs that altered themselves was common because computers of that day were too small to hold entire large programs all at one time. Instead, different pieces of programming occupied the computer at different times, similar to a dinner party with more guests than seats at the table, where the diners take turns sitting at the table. With DREs, changes of programming can cause votes to be handled one way during pre-election tests, another way during the election, and yet another way during tabulation. Therefore certification testing, demonstrations of functionality, and Logic And Accuracy Tests, which reliably show how DRMs will work during an election, are not capable of reliably showing this with DREs.

(2) Computer programs and data can be altered without physical access to the equipment: Computer communications capability enables persons without physical access to the equipment to alter the programming and data; such capability is sometimes called "remote" communications. Tampering via

communications capability requires seconds or less per machine and can be used to alter many machines, or all machines in a jurisdiction, in a short time. For example, a tamperer could alter vote data or the ballot definitions that determine which candidate a specific vote is tallied for.

21. New York State law bans some kinds of communications capability but federal law does not ban any kinds. Such bans are not an effective safeguard against tampering via communications capability, however, because the presence and use of communications capability cannot be detected in real-life election situations. There are two reasons:

- a. Detection of communications capability in hardware, software, and firmware would require extraordinary means of inspection that boards of elections cannot accomplish due to the lack of will, mandate, and resources. Moreover, vendor trade secret contract provisions prevent this kind of inspection of equipment by election staff as well as by ordinary citizens whether candidates or voters. A vendor's certification testing laboratory would be able to inspect for such capability if the laboratory were instructed to do so, but jurisdictions cannot and do not fully inspect their equipment upon delivery to determine if it is the same as what was certified and ordered. For example the California Top-To-Bottom Review published in July, 2007, found illegal software in many of their voting systems.³² Due to miniaturization and the embedding of communications hardware

³² California Top To Bottom Review: http://www.wheresthepaper.org/news.html#CA_TopToBottomReview

into other computer components such as the motherboard, mere visual inspection of computers is not sufficient to detect the presence of communications capability.

- b. If communications capability is present in a DRE, detection of use of it and illegal intrusions would require continuous monitoring of the equipment, which is neither envisioned nor feasible during elections. Also, such monitoring would suffer from the same deficiencies of understandability and observability as the DRE equipment itself, and would not serve to make the equipment compliant with the need for citizen observation and understanding of how votes are handled.

22. The volatility of computers means that the assumptions, concepts, laws and regulations for use of DRMs cannot reasonably be applied to DREs. HAVA does not address the volatility of computers that renders DREs unsuitable for use in elections. New York State law addresses the issue of communications capability, but inadequately because its ban covers only some types of communications capability and is not supported by inspection or enforcement.

23. DREs introduce into our elections risks that are unmanageable, undetectable, and capable of enabling "wholesale" fraud (enabling a single person or a small group to control the outcome of all elections in entire states). DREs also introduce the ability of persons and interests who are not physically present to control the outcome of elections. These risks are new, uncontrollable, and not clearly understood by election professionals or lawmakers. Yet these risks can be avoided by the use of simpler, low-tech election technologies such as the use of paper ballots, along with ballot marking

devices for voters with special needs to mark their paper ballots, and counting of votes on paper ballots by hand or by audited optical scanners.

24. The risks introduced by DREs are not offset by any benefits. The touted DRE benefit of accessibility to voters with special needs can be achieved with low-tech and non-computerized assistive devices. The touted DRE benefit of fast election-night tallies can be achieved with optical scanner systems which use voter-marked paper ballots.
25. Optical scanners are computers, but voting systems using optical scanners enable appropriate citizen observation because of the use of voter-marked paper ballots. The history of fraud with paper ballots shows that such fraud is detectable. Its detection requires only appropriate observation and recounting, and its prevention requires only local political will and community involvement in elections. Malfunctions of optical scanners are much less frequent than such problems with DREs,³³ and are easily detected by feeding batches of manually-counted ballots through the scanner and comparing the manual tallies to the scanner's tallies. This is illustrated by a Memorandum from Lucille Grimaldi, Manager, Electronic Voting Systems, to the Commissioners of the Board of Elections in the City of New York dated May 15, 2003, describing detection of malfunctions of an optical scanner and its repair.³⁴
26. HAVA and the subsequent rapid increase in use of DREs have changed the type of election fraud that America has to deal with. DREs, unaudited optical scanner

³³ For example, in the November 7, 2006, election, trouble reports numbered 760 for DREs and 209 for optical scanners. "E-Voting Failures in te 2006 Mid-Term Elections" prepared by VotersUnite.Org, VoteTrustUSA, Voter Action, and Pollworkers for Democracy, January, 2007. <http://www.wheresthepaper.org/E-VotingIn2006Mid-Term.pdf>

³⁴ Grimaldi Memorandum of May 15, 2003: <http://www.wheresthepaper.org/NYCBOEScanRpt030515.pdf>

systems, and central tabulators introduce new risks that are not offset by any benefit. Such equipment enables a single person to control election outcomes by tampering that takes only a few seconds, whether before, during and/or after an election. Such fraud can be accomplished:

- a. On an unprecedented "wholesale" or nationwide scale.
- b. While leaving no evidence.
- c. By vendors and financial interests who need never set foot inside a polling place or local Board of Elections.

27. I am concerned that the action taken by the U.S. Department of Justice may result in New York State buying DRE voting equipment and using it in 2008, despite the vast quantity of information that has been published in every media about the failures of such systems and the chaos they have caused in the elections of other jurisdictions, and despite the many studies that have documented the poor quality, security problems, and unmanageability of such systems already in use.

28. The New York State Board of Elections has spent a great deal of effort to write model regulations to prevent the problems that have occurred elsewhere from occurring in New York, and to prepare for safe use of our future voting equipment, yet the U.S. Department of Justice does not want to allow New York State to take the reasonable and diligent steps our state has determined are needed, and which are a model for the nation.

29. I am concerned that the U.S. Department of Justice appears to have assumed that currently-available electronic voting equipment is secure. The notion of "secure computers" is mythical, however, because no such entity exists. As leading computer and electronic voting expert Dr. Avi Rubin has said in his blog of March 7, 2007 at <http://avi-rubin.blogspot.com/2007/03/todays-congressional-hearing.html> :

“[W]hen I first studied the Diebold DRE in 2003, I felt that a Voter Verified Paper Audit Trail (VVPAT) provided enough assurance. . . . after four years of studying the issue, I now believe that a DRE with a VVPAT is not a reasonable voting system. The only system that I know of that achieves software independence as defined by NIST, is economically viable and readily available is paper ballots with ballot marking machines for accessibility and precinct optical scanners for counting - coupled with random audits. That is how we should be conducting elections in the US, in my opinion.”

I declare under penalty of perjury that the foregoing is true and correct.

/s/

Executed on December 10th, 2007

Teresa A. Hommel