



ABFDE News

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THE GAVEL OF PRESIDENT ROSALIND SPENCER



Dear Diplomates

Last month two family bereavements necessitated me spending an extended period away from my desk and I have been profoundly grateful to our Executive team for acting on my behalf as needed. Since my recent thoughts have been focused on tributes to lives, be they short or long, and the accomplishments therein, I thought I would mention the life of Adrian Frutiger (1928-2015), who passed away recently.

Adrian Frutiger gave shape to several of the 20th century's most celebrated and durable typefaces. Born in Switzerland, Frutiger attributed some of his skills to genes inherited from his farming ancestors in the Bernese Oberland. Here there was a tradition of making paper cutouts and silhouettes by hand out of thin black paper, depicting the daily lives of the men and women, tending their livestock and cutting hay.

Many of his designs were constructed using similar techniques, shaving millimetres off large-scale paper proofs until they conformed to his vision of an open and clear message without impediment. His sharp-edged sans serif fonts are widely used today in street signs and airports as well as by Apple, Audi, and eBay.

He designed dozens of fonts during his career, including Univers (London street signs), Avenir, Ondine Script (popular with designers of Chinese restaurant menus!), Méridien, Président, Vectora, Herculanum, Rusticana, Centennial, Egyptienne, Iridium, Serifa, Glypha, Apollo, Versailles and Frutiger (used at John F Kennedy and Charles de Gaulle airports and adopted by the Swiss government for the country's road signs). Frutiger's long career spanned the hot metal, phototypesetting and digital typesetting eras.

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THE GAVEL

CONTINUED FROM PAGE 1

He adapted Bodoni and Garamond for the then new photocomposing system. Perhaps his most ubiquitous typeface is the optical-character OCR-B font, designed in 1968 and later becoming the world standard on cheques etc. He holds a well-earned place in a small fraternity of globally renowned typographers.

May I wish you all a very Happy New Year.



Rosalind J. Spence

FROM THE EDITOR

I am constantly amazed at the breadth and depth of knowledge that our Diplomates have to share. Among our membership there are thousands of professional and personal experiences from which we can learn and grow. Thank you to those Diplomates who were kind enough to provide content for this newsletter. I look forward to more issues with interesting content and helpful information.

I consider this publication to be an important connection between us. Not all of us have the wherewithal



to attend distant conferences, nor are all of us in a position to give of our time to such endeavors as OSAC or SWGDOC. Nevertheless, these are the threads that join us. It is our responsibility as standard bearers of our profession to keep current and aware of our industry's progress (or lack thereof). I appreciate everyone's efforts in providing the stitching that creates such a fine organization.

I hope to see you in February at the AAFS conference in Las Vegas.

Happy New Year to all,
Linda

EUROPEAN ACADEMY OF FORENSIC SCIENCE
CONFERENCE IN PRAGUE



By Jane Lewis
 MFA, D-ABFDE
 Milwaukee, Wisconsin

“The conference presentations were all in English”

The 7th European Academy of Forensic Science Conference (EAFS) took place in Prague, Czech Republic, September 6-11, 2015. The EAFS occurs every 3 years in a different European city. It organized around 5 major themes:

1. Management of Forensic Science Laboratories,
2. Future development in Crime Scene Investigation,
3. Trends in Traditional and Novel Forensic Casework Approaches,
4. Electronic Data Evidence,
- and 5. Interpretation of Forensic Evidence.

The conference presentations were all in English. Poster sessions were scheduled Monday, Tuesday and Thursday. Exhibitors booths were open the entire conference. Seven invited

speakers from around the world – Max Houck and Paul Reedy from the US – spoke during the plenary sessions during the noon hours most conference days.

The Questioned Document program filled Tuesday of conference week. My presentation was titled Minimizing Cognitive Bias in Forensic Document Examination. I suggested using a phone script and impartiality



Revelers at the EAFS Conference dinner at the Prague Convention Center included from left to right Petra Moravcova (FDE Prague Police Laboratory), Mickey Maier (Independent Fiduciary and Jane's spouse), Jane Lewis (FDE USA), and Martina Lunakova (FDE Prague Police Laboratory).

PRAGUE, CONTINUED

memo (sent via email) to prevent attorneys from imparting unnecessary potentially biasing case information to forensic document examiners. The presentation was well received. Other topics included: Electronically Captured Handwritten Signatures, Ink Dating Using Solvent Analysis, Creation of International Databases and Their Use in Document Examination, Forensic Examination of Electronic Signatures, XRF Analysis of Office and Offset Printing Paper, Latin vs. Cyrillic Script, and Lay and Expert Estimations of the Frequency of Occurrence of Handwriting Features in the US.

An excellent workshop was given by Martina Lunakova from the Department of Questioned Documents in the Institute Criminalistics Prague, Czech Republic on Wednesday. Her inspiring workshop Sequence of Entries Determination, used simple, affordable instrumentation to sequence toner and handwriting strokes (mainly signatures) on paper. The beauty of the process allows determination of sequence of toner vs. ink without intersection of the two.

Martina expressed an interest in presenting at a future ASQDE conference in the US.

Social programs included a Welcome Reception on Sunday, a Conference Dinner on Tuesday, and an optional formal Gala Dinner on Thursday. A short (3-4 mile) run for conference attendees moved us through Vysehrad Park at 7:30 am Thursday. The

cool morning made for swift finishing times. The park boasts a grave yard filled with distinguished Czechs like Dvorak the composer and Alfons Mucha the art deco artists and creator of the inspiring Slav Epic series of giant paintings that illustrate beautifully the history of the Slav people.

Prague serves fine pilsner beers and is filled with lovely ancient buildings like the Prague Castle (Hradcany), the Old Town and Jewish Quarter. It sits next to the lovely Vltava River. The public transportation moves people around Prague cheaply and efficiently. The EAFS 2018 is scheduled for Lyon, France.

See you there.



Forensic scientists during the morning fun run in Prague (Jane Lewis in hat).

The Dancing House, also called Fred and Ginger, by architects Frank Gehry and Vlado Milunic is situated along the Vltava River in Prague.

*The Standard
Training
Program
...a twenty-six
module
program...*

SWGDOC UPDATE

The Scientific Working Group for Forensic Document Examination (SWGDOC) is pleased to announce that a long term training project is in final draft and is currently being reviewed by members of SWGDOC. The Standard Training Program for Forensic Document Examiners is a twenty six module program and is the culmination of a project begun by a SWGDOC task group approximately four years ago. The program is based on other successful two to three year programs, including those from the US Army, Florida Department of Law Enforcement, and San Diego Sheriff's Department Questioned Document Units.

The draft standard includes a scope, objectives, and references for each training module, as well as program

duration and requirements of the trainer and trainee. It is a training program shell that a primary trainer can start with and build a training program based on the laboratory's resources.

SWGDOC is operating as a task group of the newly formed Organization of Scientific Area Committees (OSAC) to which the reviewed draft program will be submitted. The document, if passed, will then proceed to placement on the OSAC Registry with other similarly vetted standards. Instrumental in the development of the Training Program has been Brett Bishop, Ted Burkes, Marie Durina, Jim Josey, Carl McClary, Linton Mohammed, Karen Nobles, Joe Parker, and Andy Szymanski.

Submitted by Carl McClary

DIPLOMATE NEWS

Brian Lindblom would like to remind everyone that he has now been retired for almost 8 months. His current email is aplegateprivate@gmail.com.

Diplomates who attend the AAFS Workshop on February 22, 2016 *Measuring Frequency Occurrence in Handwriting and Hand Printing Characteristics* will earn 6 RECERTIFICATION POINTS.

Richard Horton

Most of you already know that I have ended my employment with the Virginia DFS, effective at the end of Feb. Between now and then I will only be in the office for a day or two per week- and a lot of that is for court. For that reason, please start sending emails to me at

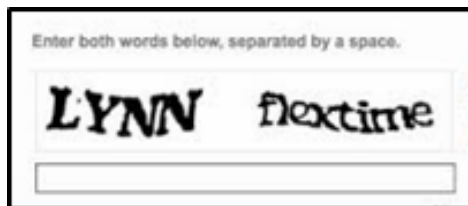
rickh109@aol.com

as I will check it regularly. You can still

WHY CAN'T COMPUTERS MAKE HANDWRITING?

Let's look at CAPTCHA.

If you've signed up for an account online, then no doubt you've seen the CAPTCHA test which consists of an image of distorted words and numbers that you have to type out. CAPTCHA stands for "Completely Automated Public Turing test to tell Computers and Humans Apart" and is a quick [challenge](#) test used by websites to distinguish people from machines in order to protect the website against automated machine detection (bots). Humans can read distorted text like the one shown below, but current computer programs can't.



There are distinct similarities between the reasons that CAPTCHA is so effective against computers, and why computers are still not up to par in pattern recognition tasks as complicated as handwriting recognition. Computers cannot apply the necessary capabilities that humans naturally possess to easily interpret CAPTCHA: invariant recognition, segmentation, and context. *Invariant recognition* is the ability to recognize the large amount of variation in the shapes of letters. Humans can identify an infinite number of versions for each character, but computers cannot. Teaching a computer to recognize so many differing

formations is an extremely challenging task. *Segmentation* is the ability to separate one letter from another. CAPTCHA makes it difficult by crowding characters together with no white space in between. Finally, *context* allows a human to distinguish one letter from another, such as "m" or "n" through the meaning of the word. Each of these problems pose a significant challenge for a computer, even in isolation. The presence of all three at the same time is what makes CAPTCHAs difficult to solve, yet humans excel at conducting all three tasks simultaneously.

The 2015 International Conference on Document Analysis Recognition (ICDAR) issued a Handwritten CAPTCHA Evaluation Challenge. The competition's objectives were to evaluate the performance of generated CAPTCHAs and study current *state-of-the-art* handwriting recognition techniques that are effective against image distortion. The hope is that through the results of this competition, it may be possible to determine and quantify the weaknesses in handwriting recognizers so that more effective handwriting recognizers can be developed. The competition's organizers believe that the results will be used to design even more secure CAPTCHAs, and benefit the handwriting recognition communities. It would behoove our profession to stay tuned to such research projects and track their successes with regard to handwriting recognition.

Continuing Education

2016

FEBRUARY

22-27 American Academy of Forensic Sciences
68th Annual Scientific Meeting
Las Vegas, NV
<http://bit.ly/1FdR69J>

APRIL

12-15 RIT Rochester Institute of Technology
Printing Process Identification and Imaging Analysis for FDE's
Rochester, NY
<http://bit.ly/1SxNPGt>

MAY

17-20 The Canadian Society of Forensic Science
2016 Conference
Montreal, QC Canada
<http://www.csfs.ca/index.html>

SEPTEMBER

18-23 The Australian and New Zealand Forensic Science Society (ANZFSS)
23rd International Symposium on the Forensic Sciences
Auckland, New Zealand
www.anzfss2016.org

15 The Midwestern Association of Forensic Scientists (MAFS)
Branson, MO

ONGOING

Center for Health Sciences—Oklahoma State University
Master of Science in Forensic Science—FDE
Online courses
<http://bit.ly/1LwK7pl>

I HAD A CASE

Happy New Year.

I want to bring this case to your attention for circulation to the membership of the ASQDE and ABFDE. I was retained back in the spring of 2015 by an attorney in Cleveland. He questioned the techniques being employed by a Dr. Kelley from California. Kelley concluded signatures on mortgage documents were not originals but copy fabrications. He initially based his conclusion on an examination of PDF copies, not off the original signatures.

His very unusual approach is to import the PDF images into Photoshop and then analyze them using colour lab, etc. He, not surprisingly, finds stray dots, marks and so on, as well as irregular ink line detail. Based on these observations he concludes the signatures are not made with pen ink on the original. Unbelievable!

When the original was presented to him and it did not show the anomalies, he opined the signatures had been overwritten with pen ink. In reality, a straightforward exam of the signatures revealed they were produced with ballpoint pen ink. They were not altered in any way.

During Kelley's deposition he referred to "Scientific of Questioned Documents, 2nd Edition" as the "BIBLE" of document examination. He went on to commend the editors. Too bad for him, because I became a witness for the Daubert challenge. Mary Kelly sat in on Kelley's testimony.

Kelley has no training or formal education in document examination. His background is in computer engineering. I believe you will find the court's ruling of interest. It can certainly be used in future challenges of this bizarre methodology.

All the best,

Brian Lindblom



Full text begins on page 10

IN THE COURT OF COMMON PLEAS

FILED

LAKE COUNTY, OHIO

2015 NOV 19 P 3:40

JP MORGAN CHASE BANK, N.A.)
DANIEL A. KELLY)
Plaintiff,)
LAKE CO. CLERK OF COURT)

CASE NO. 12 CF 000958

vs.)

OPINION & JUDGMENT ENTRY

CHRISTOPHER ARDERN, et al.)
Defendants)

November 19, 2015

The editor has invoked editorial privilege to correct misspellings, typos and grammatical errors in the text of this ruling. The document has also been reformatted for use in this publication.

JOB OPPORTUNITY

The Internal Revenue Service will soon have a job opening for a qualified FDE at the National Forensic Lab in Chicago.

The position will be for a Physical Scientist (Document Analyst), GS-1301 Series. Some of the requirements are listed below. ABFDE certification would be a plus, but is not a requirement.

General Physical Science Series, 1301 Individual Occupational Requirements

Basic Requirements:

1. Degree: physical science, engineering, or mathematics that included 24 semester hours in physical science and/or related engineering science such as mechanics, dynamics, properties of materials, and electronics.

or

2. Combination of education and experience -- education equivalent to one of the majors shown in A above that included at least 24 semester hours in physical science and/or related engineering science, plus appropriate experience or additional education.

The announcement is expected to be made around February 8th. Interested parties are recommended to set up an account at www.usajobs.gov, where the application process will be conducted.

General questions about the lab can be directed to Director Jennifer Cones, at [312-542-7801](tel:312-542-7801), or to Larry Olson (number below).

Larry A. Olson
IRS National Forensic Laboratory
525 West Van Buren, Suite 400
Chicago, IL 60607
phone: [312-542-7825](tel:312-542-7825)

*Announcement to be
published about*

February 8, 2016

A JUDGE'S FINDINGS ON AN UNUSUAL METHODOLOGY

This matter is presented on the magistrate's decision filed on May 14, 2015 addressing the motion of plaintiff JPMorgan Chase Bank, N.A. [JPMorgan] to strike the expert reports of James Madison Kelley, Ph.D. on the grounds the same are not based on accepted scientific methods nor are the opinions contained therein reliable. Defendant Christopher Ardem filed two objections initially and three in a supplemental filing after obtaining a transcript of the proceedings. JPMorgan filed its opposition.

Upon an independent review of the transcript, the briefs and the magistrate's decision, the five objections are overruled.

As to the first objection, the court finds that the magistrate properly applied the *Daubert* analysis to reach the conclusion that the proffered testimony of Dr. Kelley was unreliable, whether it was deemed to be scientific, specialized or of technical expert nature.

As to the second objection, the court finds that the magistrate did not overstep the court's role to act as a gatekeeper when the testimony of Dr. Kelley was found unreliable, even though the issues will ultimately be tried to a court not a jury. In rejection of Arden's position one need only review *Kumho Tire Co., Ltd v. Carmichael*, 526 U.S. 137, 119 S. Ct. 1167, 143 L.Ed.2d 238(1999) wherein the U.S. Supreme Court raised no objections when the district court applied a *Daubert* analysis prior to its review of a

motion for summary judgment. In fact the U.S. Supreme Court specifically noted that a trial court has broad latitude in how it determines reliability as it does with its ultimate determination of reliability. *Id* at 142.

The third, fourth and fifth objections each contend that the magistrate failed to give proper weight to Dr. Kelley's testimony.

The third objection contends that as an expert on printers and toners Dr. Kelley is qualified to give an opinion that an endorsement stamp on the original note showed evidence of movement of an inkjet print head. However, the court disagrees with the premise that Dr. Kelley was qualified as expert on this topic. The magistrate properly excluded these opinions of Kelley.

The fourth objection relies on the premise that Dr. Kelley's methodology with respect to magnification and Photoshop color comparison is indeed reliable. However, upon reviewing the record, the court finds that the methodologies applied by Dr. Kelley are not reliable. Finding Arden's premise to be false, the court finds that the magistrate properly concluded that Dr. Kelley's testimony on these issues are not reliable and should not be considered.

As to the fifth objection, the alleged existence of hole punches on a copy of a note but not on a copy of the original note does not involve expert testimony when all that is required is an examination of the actual original note. This objection is without merit.

Further, the hearing concluded when testimony was preserved on October 14, 2014. The magistrate's decision was filed

"Reports ...are not based on accepted scientific methods"

on May 14, 2015. It is improper to base an objection on events that either were not in the record when the matter was submitted to the magistrate or occurred after the magistrate's decision was issued. For this reason, the JPMorgan's motion to strike the rebuttal affidavit of Kelley filed on October 28, 2014 is granted.

The court has independently reviewed the objections and found the import of each to be without merit. While the magistrate's decision may contain a few minor misstatements, such as the number of Dr. Kelley's relevant professional affiliations, each is insubstantial when viewed in the context of the entire record and none affect the ultimate legal conclusion as to the reliability of Dr. Kelley's testimony as to the signatures on the original note. After such review of the transcript, exhibits, briefs and magistrate's decision, the court concludes that the magistrate properly determined the factual issues and properly appropriately apply the applicable law in reaching the conclusion that the expert report of James Madison Kelley, Ph.D. should be stricken.

These factual findings, applicable law and legal conclusions are hereby adopted.

1. Kelley has a Bachelor's of Arts degree in mathematics, a Master's Degree in Electrical Engineering and a Ph.D. in Electrical and Computer Engineering. Kelley's only professional affiliation is with the International Association of Electrical and Electronic Engineers.
2. Kelley does not purport to be a handwriting examiner. Kelley has no formal educational training with regard to forensic document examination, ink analysis, paper, printers, toner, or scanner equipment.

Kelley does not purport to be an expert regarding ink analysis/ composition, paper, printers, toner or scanner equipment. Kelley has taken no courses on the subject of computer forgery or how to conduct a computer examination of a document. Kelley has written no articles nor published on this subject nor has he lectured on his methodology.

3. Kelley's forensic interest and experience is barely two years old and thus is limited. His opinions appear to be born out of a personal dispute Kelley had with his mortgagor.
4. Kelley has not satisfied the recognized industry standards established by the American Society of Testing and Materials [ASTM] for forensic document examiners. One requirement is a two year study or apprenticeship program with a qualified forensic document examiner. He is not a member nor is he affiliated with ASTM.
5. ASTM No. E1422-05 is a recognized industry standard for forensic examination of signatures in ink.
6. Kelley's methodology is self-taught. He considers himself to be a non-traditional forensic document examiner who has developed a systematic method to discern when a signature on a document is a computer generated signature copied from an originally signed document. His method uses scanned images of original documents and photographs taken with microscopic lens that are converted to a PDF [Portable Document File] in Adobe Acrobat and with the aid of Adobe Photoshop and magnification the images are examined for differences in ink color, ink pooling, traces of inkjet overspray or signs of blocking and ringing. Based on this, Kelley

“[He] has no formal training ...”

UNUSUAL METHODOLOGY (CONTINUED)

forms an opinion as to medium used to produce the signature on a document.

7. Kelley's methodology is unproven. It has not been subjected to peer review or peer testing. Nor has it gained acceptance in the general scientific community, let alone the community of forensic document examiners.

8. Kelley states his testing methods can be duplicated but cites to no instance where a third party verified his findings. Kelly is unaware of the rate of error associated with his methodology nor does it appear he has conducted tests to determine what the rate of error is.

9. **Kelley wrongly attributes part of his methodology to practices accepted by Jan Seaman Kelly and Brian S. Lindblom, authors of *Scientific Examination of Questioned Documents*, a treatise widely recognized by forensic document examiners. Lindblom rebuffs such an assertion stating neither Kelley's method of document examination nor his training conforms to the practices outlined in his co-authored book.**

10. Kelly's methodology has not been accepted as a qualified expert opinion regarding the authenticity of a document in any Ohio court, state or federal, nor in any state or federal court elsewhere in this country.

The relevant law is as follows:

1. Evid.R. 702 regarding expert testimony states a witness may testify as an expert if:

- (1) the testimony is beyond the knowledge of a layman;
- (2) the person possesses specialized knowledge, experience, training or education on the subject matter; and
- (3) the testimony is based on "reliable scientific, technical, or other specialized information."

As to the latter, where the testimony relates to a test or procedure, reliability can only be satisfied if :

- (1) the theory on which the test or procedure is objectively verified or is validly derived from widely accepted knowledge, facts, or principles;
- (2) the design of the procedure reliably implements the theory; [and]
- (3) the particular procedure was conducted in a way that will yield an accurate result." Evid.R. 702 (C).

2. "In determining whether an expert's opinions are reliable under Evid.R. 702 (C), our inquiry focuses upon whether the principles and methods the expert employed to reach his opinion are reliable, rather than whether the conclusions are correct."

State Farm Fire & Cas. Co. v. Holland, 12th Dist. No. CA2007-08-025, 2008-Ohio-4436, ~ 21, citing *Miller v. Bike Athletic Co.*, 80 Ohio St.3d 607, 611, 1998-Ohio-178, 687 N.E.2d 735.

The trial court, "as part of its gatekeeping function, must assess both the relevance of the expert's testimony and the reliability of the testimony prior to admitting such testimony into evidence."

State v. Widmer, 12th Dist. No. CA2011-03-027, 2012-Ohio-4342, ~ 67, citing *Terry v. Caputo*, 115 Ohio St.3d 351, 875 N.E.2d 72, 2007-Ohio-5023, ~ 24; *Miller* at 611, 687 N.E.2d 735. {~ 16}

"In evaluating the reliability of scientific evidence, several factors are to be considered:

- (1) whether the theory or technique has been tested,
- (2) whether it has been subjected to peer review,

- (3) whether there is a known or potential rate of error, and
- (4) whether the methodology has gained general acceptance."

Miller at 611, 687 N.E.2d 735, citing *Daubert v. Merrell*

Dow\Pharmaceuticals, Inc., 509 U.S. 579, at 595, 113 S. Ct. 2786, 125 L.Ed.2d 469 (1993).

Moreover, a court may conclude that there is "simply too great an analytical gap between the data and the opinion proffered."

Valentine v. Conrad, 1 IO Ohio St.3d 42, 850 N.E.2d 683, 2006-Ohio-3561, ~ 18."
Marcus v. Rusk Heating & Cooling, Inc., 12th Dist. No. CA2012-03- 026, 2013-Ohio-528, ~ 15-16.

Based on the factual findings previously stated and the applicable case law, these conclusions of law are issued:

1. Defendant Ardern has not established by a preponderance of evidence that Kelley's educational background and experience qualify him as an expert in the field of forensic document examination, regardless of the methodology he employs.
2. Kelley's methodology of document analysis failed to satisfy any of the four factors set forth in *Miller* and *Daubert*. Kelley presented no empirical studies that showed his unique methodology and theory of forensic color of ink document analysis withstood analytical testing. No evidence was presented that peer reviews were ever conducted of Kelley's methodology, let alone a peer review that supported his

methodology. Kelley never addressed the rate of error associated with his methodology. And lastly, Kelley openly admits his methodology has not gained general acceptance in the community of forensic document examiners.

3. Given the totality of the circumstances, Kelley's opinion that a signature on a document is an original signature or a computer generated reproduction is unscientific, untested and as such is patently unreliable. Further, the accuracy of Kelley's methodology is highly suspect absent evidence of some peer examination offering some corroboration and validation.
4. The opinions of Kelley that the signatures on the documents are not original but computer generated are not reliable.

Based on the above, the motion of JPMorgan to strike the expert reports of James Madison Kelley, Ph.D. is granted. The court shall proceed forthwith to review the pending motion for summary judgment filed by JPMorgan on September 30, 2014, and the motions to appoint a standing process server, for attorney fees and to strike filed by Ardern.

IT IS SO ORDERED.

“IT IS SO ORDERED”

WWW.ABFDE.org

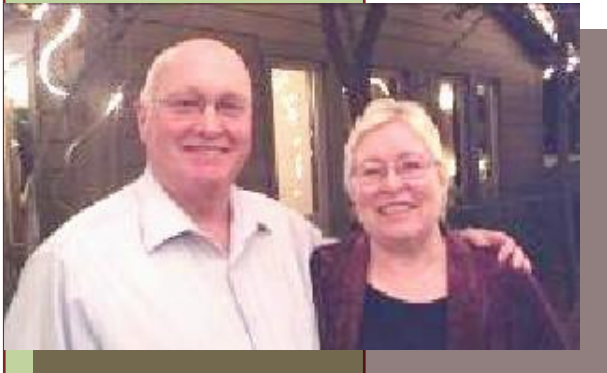
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but don't know what to expect?*

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For the next location and date, contact:

*Lisa M. Hanson,
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lisa.hanson@state.mn.us*

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**Deadline for the next
issue:**

June 1, 2016