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Rules of E-Filing¹

By James E. McMillan, National Center for State Courts, 2011

As in any technology project, the “devil” is in implementation and acceptance of the new system by the judges and court staff. E-filing affects every part of the court operation since it transforms the filing system and the documents used to make court decisions.

Case Management Systems (CMS) have traditionally automated the registry/docket (historical event record), participants, and scheduling /task control and has left the document filing system for separate image document management programs. This has primarily been done because of cost and the lack of workflow and task control capabilities in traditional CMS.

But I believe that this is also a remnant of the courts traditional organizational division between the docket/registry/indexing function and the document filing system. Separate staff and separate processes are a common organizational structure in many clerk's offices.

Even today a great majority of courts still maintain physical case files. And workflow in manual file systems has meant physically moving the file folder from person to person and office to office. In many courts the file folder also serves as the case event registry. This function is addressed by a printed registry form grid on the folder cover the list of documents contained within. The advantage for this approach is that when one works on the contents of the folder, the data capture and presentation is literally in one's hands.

Bestselling author, Malcolm Gladwell explains in his article “[The Social Life of Paper](#)” the attractiveness of this approach in a collaborative work environment like the court:

“Because paper is a physical embodiment of information, actions performed in relation to paper are, to a large extent, made visible to one's colleagues. Reviewers sitting around a desk could tell whether a colleague was turning toward or away from a report; whether she was flicking through it or setting it aside. Contrast this with watching someone across a desk looking at a document on a laptop. What are they looking at? Where in the document are they? Are they really reading their e-mail? Knowing these things is important because they help a group coordinate its discussions and reach a shared understanding of what is being discussed.”

But the same capability can be done with even more ease in an E-filing/Electronic Document Management system as will be discussed in later posts in this series.

E-filing, document, and case management functionality cannot be separated. Many courts have tried what is now termed “e-delivery” systems. This is where the documents are electronically submitted

¹ This is a compilation of articles originally posted on the [National Center for State Courts, Court Technology Bulletin blog](#) from June to October, 2011.

only to transfer the work of printing, collating, and storing the paper into the physical file folder to the court staff. One can imagine the additional workload for court staff that negates the initial efficiencies of E-filing. These projects have been shuttered after a period of time because E-filing did not reduce but rather increased the clerk's staff workload.

Over the next several weeks we will offer eight rules of E-filing systems implementation. However, please note that there are many additional factors in any successful implementation [as defined in classic project management structures](#) including proper governance, budget, testing, and communication that cannot be ignored. So please keep that in mind as you read our "rules".

Rule Number 1: All documents created by the court are stored in the electronic document management system (EDMS) are designated as “the official record”.

Why this rule? Because many courts have and continue to maintain dual paper and electronic systems have reported that they have not benefited from their document management systems - simply because they are maintaining two systems. Needless to say, doubling the number of systems is not a recipe for efficiency. And while it takes time to transition from the paper file room to the electronic document system, the sooner that the conversion takes place, the better.

The reality is that many judges continue to demand paper. Some argue it is that it is their most efficient way doing work. Some argue they are “too old” to change; and some simply distrustful of change because of the loss of control. Therefore every system must be able to provide “[paper-on-demand](#)” for staff use. But the printed copy is simply a work copy. It is one that can be read, annotated, even temporarily filed in personal files but it is not the official file copy.

The truth is that electronic documents are more secure and more easily verified². Technically all electronic court documents would be assigned [a single unique Uniform Resource Name \(URN\)](#) as well as [a digital signature hash](#). Microsoft supports MD2, MD4, and MD5 hashing algorithms developed by RSA Data Security (www.rsa.com). The URN, if used properly, can “future proof” document access and provide a significantly better approach to document authentication.

And most important, if made available the electronic record can be more easily retrieved and verified since it is provided through the official court website. The URN can also be used to access the document via the internet or even using [text SMS](#) to report the basic date of filing, court where filed, and the filer (perhaps the judge). This concept potentially extends document validation to citizens with mobile cell phones who may not have access to computers and the internet and makes it more difficult for a forged document to be accepted.

And last, electronic documents can be validated via system audit “logs” created by through database system when a record is created in the CMS/EDMS that notes the user, date, time (to the thousandths of a second), and again, if captured, the signature hash. These logs could in turn be written to backup or even write-once media as a check against data corruption and legal challenge.

² For more on digital signatures and digital rights management (document file control) see the [NCSC Future Trends Article: Digital Rights Management \(DRM\) Technology Will Change the Way Courts Work](#) (PDF).

Rule Number 2: User authentication must be designed into the overall e-filing solution.

For too long court E-filing has been generally limited to civil case matters. This is perfectly understandable from a legal viewpoint since the parties and/or court can simply agree to its use. But today we should design E-filing systems to deal with all case types such as criminal and juvenile that has a decidedly greater need for user verification.

Earlier this year I posted an article on "[Trust and E-Filing](#)" here on the CTB. But there are some additional issues that can be discussed on this topic.

First, the US Department of Justice "Global" data sharing initiative has delved into this issue through their [Global Federated Identify and Privilege Management \(GFIPM\) working group](#). The introductions to their standards work states:

Achieving information sharing objectives requires that partners establish wide-scale electronic trust among the caretakers of critical information and those who need and are authorized to use that information. The information is sensitive-inappropriate sharing is just as dangerous as lack of sharing. That is where a new and rapidly maturing technology called federated identity comes in. Federated identity allows a user's roles, rights, and privileges to be communicated securely in the justice community and, in particular, to those who hold the information required to effectively safeguard our nation.

The Global Federated Identity and Privilege Management (GFIPM) framework provides the justice community and partner organizations with a standards-based approach for implementing federated identity... The GFIPM metadata and framework support the following three major interoperability areas of security in the federation:

- *Identification/Authentication - Who is the end user and how were they authenticated?*
- *Privilege Management - What certifications, clearances, job functions, local privileges, and organizational affiliations are associated with the end user that can serve as the basis for authorization decisions?*
- *Audit - What information is needed or required for the purposes of auditing systems, systems access and use, and legal compliance of data practices?*

As GFIPM states "'Federation' is a fundamental concept". In other words, the goal should be that the users of one system would be "trusted" in their identity, and also in their "roles" as information providers and access, will be trusted by other systems in the federation. This is especially difficult in the USA where the governmental organizational structure was designed about the concept of "separation of powers". Thus it is no surprise that inefficiencies in data sharing (in this case E-filing) occur since it was designed that way.

Now extend these concepts to the entire legal community and in turn to all citizens and you have one huge problem to solve. This is such a huge issue that it has been addressed in the "[National Strategy for Trusted Identities in Cyberspace: Creating Options for Enhanced Online Security and Privacy](#)" that was released in June, 2010 by [President Barak Obama of the USA](#).

Now at this point in most articles I usually try to make a recommendation for action or a potential solution. The two efforts listed above are a beginning; and there are numerous other efforts underway to create a “[digital identity](#)”. The requirements are there and it is clearly resulting in E-filing adoption issues. However at this point in time I think we have to wait to see what develops.

Rule Number 3: Design Backwards

Information presentation should be designed around the work tasks that a judge or clerk performs. [Malcolm Gladwell in his article, “The Social Life of Paper”](#) explains:

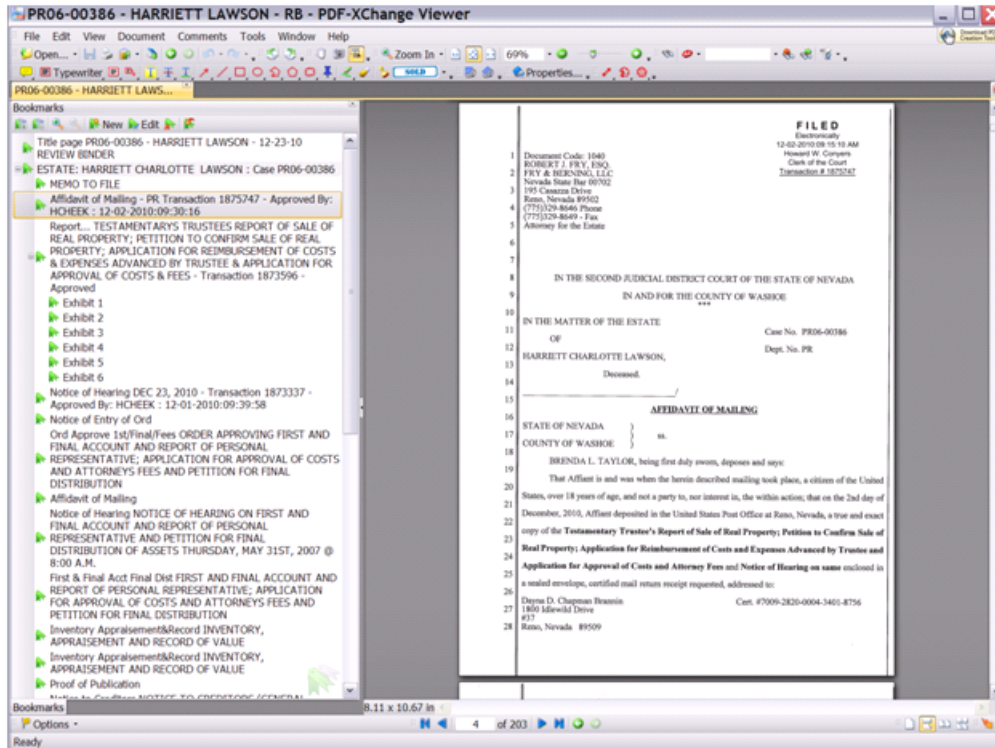
“It is only if paper's usefulness is in the information written directly on it that it must be stored. If its usefulness lies in the promotion of ongoing creative thinking, then, once that thinking is finished, the paper becomes superfluous. The solution to our paper problem, they write, is not to use less paper but to keep less paper. Why bother filing at all? Everything we know about the workplace suggests that few if any knowledge workers ever refer to documents again once they have filed them away, which should come as no surprise, since paper is a lousy way to archive information. It's too hard to search and it takes up too much space. Besides, we all have the best filing system ever invented, right there on our desks -- the personal computer.”

Therefore, it makes eminent sense to take the next step – to present and even format the documents to take advantage of the electronic environment. In other words, I am advocating designing e-filing systems from the inside out, or backwards from the judge’s information presentation needs back to the filers. But unfortunately our current approach is to maintain court documents in their [two-dimensional/standard paper sized paradigm](#). This can and should change.

How you might ask? A key idea behind XML technology was to separate information presentation capabilities from the data. This concept is used in guided interfaces like [Access2Justice Author](#) that step a filer through a series of questions in one format to create the final legal form presentation. If the court receives the e-filed document with the XML then that obviously helps to extract the form data for case management system entry; but also opens the possibilities to easily sort and combine information to facilitate decisions by judges and staff.

An excellent presentation on effective information presentation taking advantage of their electronic environment was made by [Presiding Judge Connie Steinheimer of the Nevada State District Court](#) at the [E-Courts 2010 conference](#). The example shown below is of an electronic file that she used on the bench during a hearing.

As one can see below, this use of the PDF “binder” capability allows the documents to be grouped and ordered as desired in order to quickly navigate to the document in question or, automatically sort the documents needed in the hearing to the top of the order. This approach replaces the “yellow sticky note” approach to quick document access that is practiced today in courtrooms all over the country. Judge Steinheimer remarked during her presentation that she feels she can adjudicate matters twice as fast using the electronic file compared to manual. And in fact she had substituted for an absent judge and was frustrated by not being able to quickly navigate the paper file in comparison.



Further, other courts have used staff (or automated tools from the legal research vendors) to build case file abstracts or outlines with hyperlinks that allow a judge to have “click” access to the points of evidence or law.

But the documents themselves can be dynamic containing all information but displaying only what is needed at the time of the filing or hearing. I found several examples of dynamically expanding lists and paragraphs online as examples of what is possible particularly for courts that use standard forms. Many of these standard forms can be completed online and saved and e-filed so that the court can control the information and the presentation for efficiency.

See examples at:

<http://www.howtcreate.co.uk/tutorials/jsexamples/treeselect.html>

and

<http://www.dhtmlgoodies.com/scripts/show-hide-content-slide/show-hide-content-slide.html>

And last, electronic document systems allow judges and others to download personal work copies to portable devices such as Pad or Tablet computers. Colorado State Court Judges in the USA have personal work copies of their entire caseload on their Tablet PC's. This in turn allows them to annotate and organize the documents in any manner they wish. And so they carry the documents for their entire caseload under their arm.

Rule Number 4: Court Document Creation must be Integrated with the CMS.

A great percentage of documents in a case file are produced by the court. Therefore it is imperative that a court e-filing system seamlessly interact with the court's case management system (CMS) and word processing capabilities.

All CMS contain the case number, caption, party, attorney, participant, and process information.

However many CMS do not necessarily assist judges or even staff to create documents. [Ideally document templates would be automatically called \(usually via macro and SQL query\) and merge all data that can be properly derived from the CMS into the court-created document.](#) In contrast, if judges and court staff are re-typing that information into the document, then much efficiency of court automation systems are lost. And it is necessary that a full featured word processing system be used for this function since this operation should be used for all court documents and not only for "standard" CMS derived "forms/reports".

Once the documents are created and submitted to the CMS in the court there are two benefits. The first is that the documents are "self-docketing" since they were created through the CMS and so it "knows" what the document is; and second the E-filing system can be used for notification and distribution thus reducing if not eliminating manual processing of these functions.

Parenthetically, a benefit to the E-filing process from CMS/document creation integration is that the system and computer network themselves provides and support validation and verification of the documents provided by CMS user authentication.

Last, in 2011 and onward document creation should be based upon [the international ODF standard](#), since they are XML standards based, are one potential form for document creation that is supported by [Microsoft Office 2010](#), WordPerfect, and [Open Office](#) and/or [Libre Office](#) systems. No more .doc or .wpd file conversion issues since they all support an open and international document standard. This approach also alleviates future incompatibilities and supports electronic archiving requirements.

Application of this standard by courts can be extended to the bar and other filers as a "web-based service" in order to support their side of the E-filing document equation. Unfortunately there are very few systems that provide document templates or even guidance to attorneys in creating electronic documents. By reference, [Singapore](#) and the [Texas Supreme Court](#) are leaders in this approach.

Rule Number 5: Efficiency. E-filing Should Facilitate More Efficient Court Processes and Decisions.

First, once E-filing is implemented courts should re-engineered their rules and processes to take advantage of the new capabilities. A good example is the court in Baltimore, Maryland that adjudicated thousands of asbestos matters. The judge worked with the attorneys to group the electronic submissions 10 at a time containing identical facts (same shipyard, timeframe, and injury) and in turn modified the review presentation screen so that he could more quickly review and approve the civil settlement for the filers.

Second, [as argued many times here in the CTB](#), e-filed documents should be self-registering into the courts case and document management systems. The US Federal Courts provided a "wizard"/Q&A approach to collect this data from their beginning e-filing in 1996. Today with "smart forms" and XML enabled word processing documents that data can be derived directly from the documents themselves.

Third, electronic documents simply must be able to do more work for their users than paper documents. Unfortunately, many courts continue to insist that E-filed electronic documents should continue to be functionally the same as their paper and much dumber cousins (images). Please consider that information entombed in a paper document is now locked as to its accuracy from the moment it is printed. It is essentially a timed information snapshot. This results in problems with information accuracy when that paper document is later used. One of many examples of this is when a person has a judgment vacated or set-aside. The original judgment document is still filed in the written case record. But later when the document becomes invalid, wouldn't it be great if the original document could display a link maybe even a flashing icon to guide one to the more current order? Of course it would. The electronic document world can and should be information dynamic. The electronic legal research companies ([Thomson-West](#) and [LexisNexis](#)) are already providing tools that automatically perform cite and currency checks against statutory and case law. The hyper-links and icons indicate whether the citation is accurate or if the statute was changed. Paper documents don't make the grade when judges, court staff, law enforcement, and probation are relying on the accuracy of that "locked" paper information to make decisions that affect people's lives.

Fourth, building on the previous concept; electronic documents should not only validate themselves, but also the data contained therein. For example, the document could be used to automatically search and link to the appropriate databases regarding a persons' status if they were on probation or had a civil protection order in another jurisdiction. The status and accuracy checks could be done dynamically when the document is displayed. This in turn reduces the need to capture status information in the court's case management system (potentially, the CMS could watch the documents to automatically adjust status).

Last, there is an argument that the original document shouldn't be changed because presentation is as important as the information. The internet argues for both with the dynamic nature of the web page versus the static nature of PDF documents. Both have their place. Unfortunately we have very little experience in the courts with dynamic documents in comparison to static PDF/image documents. I believe that it is time that new presentation formats be tried.

Portions of this article were previously published in this CTB article: <http://courttchbulletin.blogspot.com/2010/12/why-future-is-not-paper-second-in.html>

Rule Number 6: E-Filing Must Support the Self-Represented

To date most court E-filing has focused on civil litigation for a number of reasons. First, a majority of non-small-claims civil litigation is serviced by attorneys. This well-educated user base is generally motivated to reduce their operational costs. And with the use of E-filing in the USA Federal Courts being widespread, they are becoming very familiar with the technology. But state courts in particular are increasingly experiencing a significant transition in case participants to more and more self-representation. A recent compilation by the Knowledge and Information Services staff here at the [NCSC](#) reported that 66% of all cases heard in Minnesota courts involved the self-represented with a high of 81% of family cases. And Connecticut reported a 101% increase in the number of civil cases involving self-represented from 2005 to 2010.

So how are states going to mandate E-filing when a majority of their cases include the self-represented? The answer of course is to provide online capabilities that are designed for the self-represented. These capabilities should include first guided forms for data capture (for example see www.a2jauthor.org and

Minnesota's I-CAN! court forms (<http://www.mncourts.gov/ican>). Many courts unfortunately currently only allow self-represented litigants to generate the paper forms with these systems. However a few do "save" the data so that it can be automatically transferred and entered into their CMS/EDMS when the litigant appears at the court and submits their signed paper copies and/or fee payment. An excellent example of a fully electronic online filer/response system has been built by the UK Courts in their [Money \(Small\) Claim Online](#) system.

As you might surmise, signature and validation are an issue with the design and implementation of an online self-represented solution. There are multiple approaches to this problem that courts can explore.

First, a few states have electronic notarization legislation (<http://en.wikipedia.org/wiki/ENotary>).

Working with notaries to create a third party person who "vouches" and facilitates the e-filing solves multiple problems to empower the self-represented.

Second, courts can still require the physical signing and either mailing/presenting a single printed submission page with the electronic forms document tracking number ([see CTB article on URN:Lex](#)) to the courts. That allows the court to have a "wet" signature for verification that requires only one page to be scanned and still benefit from the filing and other documents to be loaded from the self-represented system.

A third option could be to use government identification numbers such as motor vehicle licenses, along with credit card payment to validate the filer. Most courts have access to motor vehicle databases that could be queried for name and address match with the license number as the verifier.

But please note that many clerk's offices are restricted in what they can and can't reject as a filing. By analogy, I once participated in a discussion during an annual clerk of court conference as to whether they could reject a filing that was written on the side of a [Holstein Cow](#)? The group consensus was that the judge would need to reject the filing as it was not in the purview of the clerk's staff to do so. So a properly designed system should allow for quick electronic review and rejection of improper filings.

I'm sure that there are other options and approaches in dealing with the verification issue. If you have ideas to share, please post them in our comments section.

Rule Number 7: E-Filing Should Support Government to Court Communications

The vast majority of E-filing systems focus upon civil case matters. While there are many reasons I believe that besides vendor funding, this focus greatly reduces project political risk to the courts. Judges have more discretion in managing civil cases and the parties can agree to work together to support new systems and procedures for everyone's benefit. In fact, this is how court E-filing started in 1990 in the Delaware Chancery Court.

But criminal and other cases involving human services and other government departments and programs are a different animal for E-filing. In criminal cases the attorneys are continually looking for procedural mistakes and other errors in order to dismiss cases and free or reduce the penalties for their clients. In other words, the attorneys truly embrace their adversarial role with court procedures as well as the opposing side. As a result, and along with funding challenges, there are only a handful of criminal case E-filing systems in the USA today.

This is slowly changing. In the past decade there has been a massive amount of work being done to develop data sharing standards under the National Information Exchange Model (www.niem.gov) umbrella. NIEM being a criminal justice focused program has supported standards work to overcome the barriers to data sharing and access.

And isn't E-filing data sharing? Of course it is.

In particular courts should become familiar with the [Global Federated Identity and Privilege Management Initiative \(GFIPM\)](#). As stated in the Operational Policies and Procedures document:

"The GFIPM framework provides the justice community and partner organizations with a standards-based approach for implementing federated identity. Common use of these standards across federation systems is essential to their interoperability. Leveraging the Global Justice XML and National Information Exchange Model (NIEM), a standard set of XML-based elements and attributes (referred to collectively as GFIPM metadata) about a federation user's identities, privileges, and authentication can be universally communicated."

The document continues with the "Value to the Justice Community":

1. **User Convenience:** Users can access multiple services using a common set of standardized security credentials, making it easier to sign on and access applications and to manage account information.
2. **Interoperability:** By specifying common security standards and framework, applications can adopt interoperable security specifications for authentication and authorization.
3. **Cost-Effectiveness:** GFIPM facilitates information sharing by using a standardized XML-based credential that includes information about each user's identity and privileges. This reduces the cost and complexity of identity administration required to access applications and vet users.
4. **Privacy:** GFIPM can reduce the propagation of personally identifiable information, reduce the redundant capture and storage of personal identity information, and depersonalize data exchanges across domains using privacy metadata.
5. **Security:** A federation model can improve the security of local identity information and data in applications by providing a standardized approach to online identities between agencies or applications."

But let's do a little more analysis of the "[fear factors](#)" that are particularly inhibiting criminal case E-filing.

First, as noted many times in this blog are the issues of [trust and validation](#). Suffice to say my view is that the electronic records are safer and easier to validate than their paper counterparts. And has been written about in the [NCSC's Future Trends Report](#) and [elsewhere](#), e-signatures provide massively more control over information in comparison to paper documents.

Second, what about defendants and case parties required to physically sign documents? We all use signature pads at the retail store and rapid delivery systems so that is one answer. But there can also be limited use of paper that in turn is scanned (I would include a form ID number to facilitate registration in the CMS) as [was implemented in Maricopa County Superior Court in 2009 \(see page 2\)](#) as another solution.

Third, what about systems failure? This problem already happens with the current physical documentation system when [natural disasters](#) or [fires](#) occur. And as CTB readers know, automated systems have the ability to provide multiple points of redundancy that is otherwise cost prohibitive.

And fourth, government-to-government systems should be easier to implement because there are many fewer systems to connect and secure for the majority of cases. Using GFIPM and other NIEM standards as design foundations, such systems can now be created with certainty.

Rule Number 8: E-filing and “Paper on Demand”.

E-filing (and more specifically electronic documents) provides flexibility in the ability for judges and staff to consume content. A widely held view (see note 1 below) is that if the judge is better served by printing documents; they should be allowed to print the documents that are needed for the work at hand. But when done working with those documents they are recycled and/or shredded. They aren't maintained as the official record.

But the “Paper on Demand³” concept is changing because of portable devices such as tablet (iPad) computers and e-ink readers. As long ago as 2006, [Colorado District Court Judge O. John Kuenhold wrote about his use of his Tablet PC to work with his documents](#).

Today, [Apple's iPad](#) handles [PDF](#) and [Microsoft Word](#) document display (with some caveats). But what about the e-ink devices such as the [Kindle](#) and [Nook](#)? [Well it is possible to convert Word into ePub formats for those devices](#). Again since the converted files are personal "work copies", they do not affect the official court record.

Tomorrow, as discussed at CTC-2011, the new version of the [Microsoft Surface technology](#) provides an interactive desktop work surface (think judge's bench) with touch control. And manufacturers such as [Viewsonic](#) and [Elo](#) already produce displays and systems that will benefit from upcoming [Windows 8 touch capabilities](#).

Thus the definition of “Paper on Demand” is changing and growing. And E-Filing facilitates all manner of “deep” information presentation and interaction that was not possible until today.

Conclusion

The goal of this series was to expand the thinking about E-filing beyond the delivery of static civil case documents via a web server (the most common system). E-filing must support all case types and the transition from a paper records to an electronic records foundation.

³ [The COSCA/NACM Joint Technology Committee produced a series of articles on the Paper on Demand concepts](#) that are available on the NCSC's website. [And FACT also produced a CTC-2009 presentation on the subject](#).

In turn, electronic documents do not have to be restricted to the limitations of paper documents. Formats, organization, and data capture/extraction can all take advantage of the dynamic environment that electronic information allows.

In other words, as I often teach in classes and seminars, better information can and will result in better decisions and in turn, justice. And while this goal will never be fully realized, E-filing and related technologies will move us closer.