



The Digital Decision

Judge David Harvey

District Court

New Zealand

Four Areas of Discussion


- The purpose of and rationale for a digital decision
- Technical Aspects – how to “make” a digital decision
- Legal Implications surrounding the digital decision
- Technical Issues – the lifespan of the digital decision.

What is the Digital Decision

- A digital decision is a judicial decision that employs the use of text *and other media* to explain the reasons for the outcome of a case.

Media for Decisions

- The reasons for decisions and the factual matrix underlying the issue are expressed in print and in text.
- The usual medium is paper based although Court decisions are now available on line.
- They mirror the text-based paper-based context of Court decisions.

- 
- The value of decisions, however accessible, lies in the process
 - by which the Court found certain facts and
 - applied an identified legal principle to them.

How Did We Get Here

- We take printed case law for granted. It was not always so.
- Edmund Plowden's *Commentaries*
- Sir Edward Coke's *Reports*

Coke on Reasons for Decisions

- And in troth if Judges should set down the reasons and causes of their Judgments within every record, that immense labor should withdraw them from the very necessary services of the commonweath, and their Records should grow to be *elephantini libri* of infinite length and in time opinion lose somewhat of their present authority and reverence

Printed Law as Authority

- *Entick v Carrington* (1765) 19 Howell's State Trials 1030 per Lord Camden
- “If it is law, it will be found in our books. If it is not to be found there, it is not law.”

The Problem with Print

The judicial reasoning process has been a text based representation of what might otherwise have been articulated from the Bench.

The reasoning process is constricted by the ability to use language to articulate the outcome.

The Digital Paradigm

- Allows for text based decisions to proliferate with greater availability
- Includes the ability to incorporate material in addition to text in a digital “document” such as illustrations or “multi-media” such as audio or video.
- A digital “document” is not constrained by a fixed hard copy medium and the two dimensional restrictions of print.
- Its digital properties enhance the ability to use additional tools to communicate or articulate the reasons for a decision.

The Idea is Not New

- Illustrations, diagrams, flowcharts and plans have appeared in judicial decisions.
- They are useful for identifying a problem or resolving it particularly in copyright, trademark or patent cases.

***Unilock v Microsoft* – 640 F.Supp. 2d 150 (D.R.I 2009)**

- An animated sequence was embodied in a digital version of decision to articulate and demonstrate certain fundamental principles at issue in the case.
- Judge Smith incorporated an animation with a voiceover by the expert witness who presented the animation to explain the algorithm into his decision

Not the First Time

- Scott v Harris 550 US 372 (2007)
- USSC used video exhibit reference to emphasise a critical point.
- Content hosted on USSC server
- The video spoke for itself – not a usurpation of jury role
- The approach was controversial



Technical Aspects

How to Embed Video – A Quick Guide




THE WORLD'S
STARS OF
POKER

PokerStars



Embedding Video in Word

First Method

- 
- Open the Word Document
 - Select the placement for the video clip in the decision
 - Go to Insert/Object/Video
 - Identify the video and click through so that it is embedded
 - Convert the document to PDF which will carry the embedded video through

Converting Video and Using Flash

- Issues

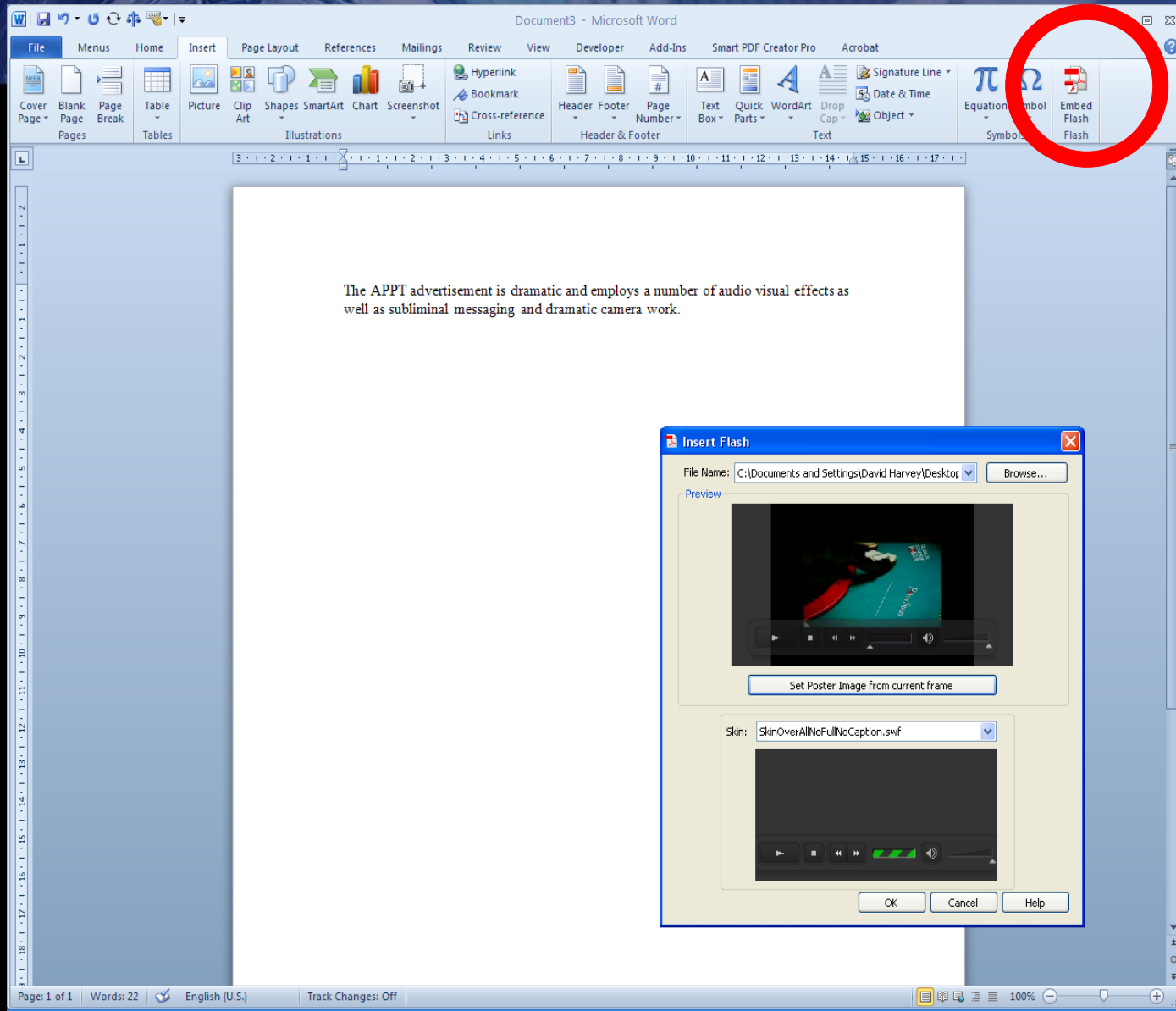
- Interference with the integrity of the exhibit.
- Having access to the tools that will undertake the conversion process.

Convert the File from .avi to .flv

The screenshot shows the AVS Video to Flash 1.2 application window. The title bar reads "AVS Video to Flash 1.2". The interface includes the following elements:

- Source File Name:** C:\Documents and Settings\David Harvey\Desktop\Pokerstars APPT New.avi (with a "Browse..." button)
- Output File Name:** C:\Documents and Settings\David Harvey\Desktop\Pokerstars APPT New_NEW.flv (with a "Browse..." button)
- Preview Window:** A video preview showing a hand holding a red card on a green table with "PokerStars" branding. Below the preview is a play button and a progress bar showing 00:00.
- Format Profile:** A dropdown menu set to "Optimal Quality (Video 320x240, 15 fps, 559 kbps; Audio 64 kbps)".
- Additional parameters:** A section with several checkboxes:
 - Create SWF Player and HTML page for web sharing
 - Loop video (start video playback automatically when it ends)
 - Autostart (start video playback when the file is loaded)
 - Crop source video (will add visual clippers to the preview window)
 - Add image as watermark
- Bottom Bar:** Contains a help icon (?), an information icon (i), and a large "Start Conversion" button with a circular arrow icon.

Embed the .flv in Word



The screenshot shows the Microsoft Word interface with the 'Insert' ribbon selected. The 'Embed Flash' icon is circled in red. The 'Insert Flash' dialog box is open, displaying a video preview and a skin selection dropdown.

Document3 - Microsoft Word

File Menus Home Insert Page Layout References Mailings Review View Developer Add-Ins Smart PDF Creator Pro Acrobat

Cover Page Blank Page Page Break Table Tables Picture Clip Art Shapes SmartArt Chart Screenshot Hyperlink Bookmark Cross-reference Links Header Footer Page Number Text Box Quick Parts WordArt Drop Cap Object Signature Line Date & Time Equation Symbol Embed Flash

The APPT advertisement is dramatic and employs a number of audio visual effects as well as subliminal messaging and dramatic camera work.

Insert Flash

File Name: C:\Documents and Settings\David Harvey\Desktop Browse...

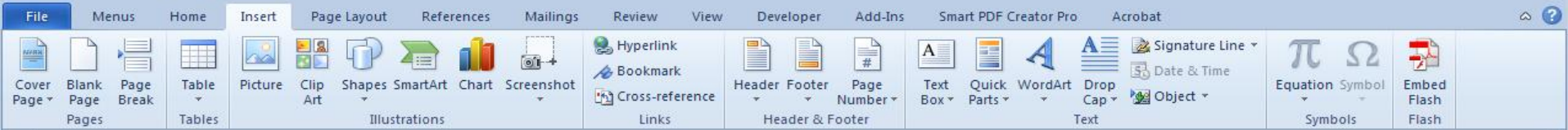
Preview

Set Poster Image from current frame

Skin: SkinOverAllNoFullNoCaption.swf

OK Cancel Help

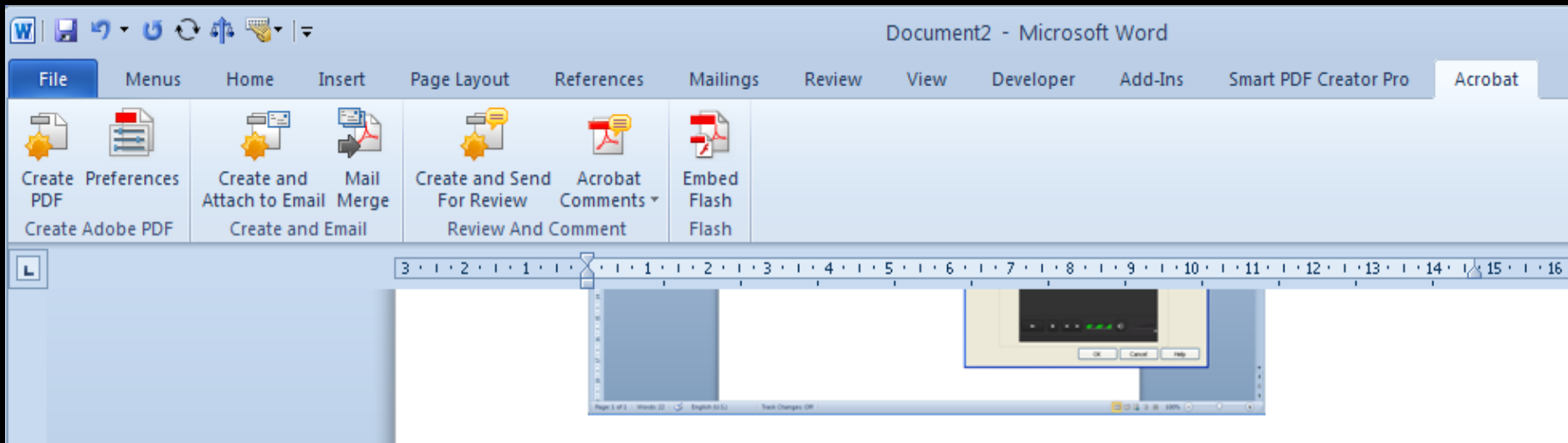
Page: 1 of 1 Words: 22 English (U.S.) Track Changes: Off 100%



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Convert Word to PDF





Legal Implications

The Use of Digital Tools

- Not every case will require the use of embedded digital content.
- Only when it is necessary to explain or demonstrate a matter, usually of evidence, should digital tools be used
- Enhances comprehension of the fact finding or judicial reasoning process
- The adjudicator is able to clearly demonstrate an important element necessary to arriving at a conclusion.
- The reader must have a device capable of allowing the digital document to be “read”

Reliability of the Decision

- Digital and hard copy versions of the same decision
- Which version should be considered the most authoritative.
- The digital decision should prevail because it contains all of the material including the illustrative or multimedia content that was necessary to explain the outcome.
- In that respect the print version standing alone is less than complete.

Completeness of the “Print” Version

- “Completeness” which parallels the digital version can be achieved
- The print version must contain a reference whereby illustrative multimedia material may be accessed
- There must be some facility whereby the illustrative or multimedia content is available on a server which can be easily accessed.
- Judge Smith did not address this problem. The US Supreme Court in *Scott v Harris* did.

Authoritativeness

- Should there be two versions – a digital version and a “print” version?
- We are already there – Westlaw, LexisNexis, Austlii, Bailii, NZLii, Canlii
- In New Zealand Judicial Decisions Online states that the “file” copy should be the authoritative source in the absence of a reported version

Aspects of Authoritativeness

- Are the two decisions textually identical?
- If material is available on the Internet a link should be provided in BOTH the “print” and digital versions of the decision.
- But the digital decision may have the video or illustration embedded within it.
- If “link rot” renders “linked to” material unavailable, the digital version preserves the integrity of the decision.
- The print version (which should be printed from the digital document) will indicate where content has been embedded in the digital document.

Authority and Reasoning

- The TEXT of the two decisions will be identical
- The reasoning path will be clear from the text
- Multimedia content will be embedded or available via a link
- Multimedia will not “play” if printed out
- Distinction between the text version and the digital version is a distinction without a difference
- The reasoning process behind either decision will be transparent.
- If multimedia element is critical to the decision it will be available
- Quality of availability will differ between digital and alternatively sourced material

Articulation or Visualisation

- In *Scott v Harris* the Court indicated that the video should speak for itself.
- Articulation or description achieves a different result for the reader than watching the visual material.
- The written word provides a layer of abstraction or distance from any emotive response that may unconsciously arise from viewing the visual material.
- People are responsive to visual and emotional stimulation, often subconsciously and without any realistic justification.
- Articulation may enhance objectivity whereas the visual material itself may have a subjective impact.

Issues Arising

- Demonstrates the care that must be undertaken in determining whether or not visual or audio material should be used in a “digital” decision.
- It may be that the use of material that provokes an emotional response is necessary
- Why?
- To fully demonstrate the effect that would be lost in the articulation or description of the material in text format.



Technical Issues

Problems or Answers that the Digital Decision May Encounter?

Five Issues

- Preservation and dissemination in the Cloud;
- The problem of short lived media and software access;
- The problem of multiple codecs;
- The problem of authentication and verification;
- The problem of user access.



There are probably others

Preservation and Dissemination in the Cloud

- Making digital data independent of media means keeping it in the Cloud.
- The key advantage is that the responsibility for high availability and routine processes like backup, replication, disaster recovery and so on can be delegated to competent professionals.
- One available commercial service is Amazon's S3 simple storage is very secure and reliable and has high availability.
- There are others.

Provides answers to other problems?

- Could answer the problems that have been raised with short lived media, software access
- Also could answer issues of permanence, availability and access.
- Authentication and verification will be dealt with later

Short Lived Media - Hardware and Software Availability

- Everything is corruptible
- Many things are resilient – see the Dead Sea Scrolls
- But they still deteriorate
- Similarly electronic storage systems are prone to deterioration.
- It is suggested that the lifespan of the average CD is only 30 years.

Accessibility Issues

- The pace of change has meant that much digital data that was accumulated say in the 1990's may now be inaccessible because modern software is unable to read it or interpret it.
- Continue to use legacy systems to reading old material
- Or convert data so it can be kept up to date.
- Software support not always available – e.g. Microsoft abandoning Windows XP

Possible Solutions

- Transparency and documentation of formats is essential
- Open source standards may avoid problems which may be associated with copyright or patent encumbered formats and methods.
- Even a basic text document needs to be stored in a format such as the open document standards rather proprietary ones.
- True also for multimedia and presentation file types

A Short-term Solution

- Locate data in the Cloud?
- Unlike print based material the digital medium allows copying and updating processes without the risk of introducing transcription errors.

Multiple Codecs

- Large number of formats and codecs
- Problems with patents and proprietary formats
- Issues surrounding format shifting
- Settle and standardise legal codec and document formats
- Thus no provider can have leverage over standards
- Formats possibly should sit within an International Standards body e.g. ISO
- Legacy support is essential

Authentication and Verification

- Provision for a verified authentic copy for comparison purposes
- Should be automated and done regularly
- Details of the comparison and authentication process need to be transparent and documented
- Associated software needs to be developed to include built in test cases to avoid dependence upon obsolete or proprietary computer architectures or languages.
- Outcome of comparison must clearly state which copy may be regarded as the master or the authoritative copy at least until the next round.

Comparison Methods

- Based on cryptographic concepts like message digests
- These are cryptographically secure check sums that guard against deliberate forgeries as well as more innocent errors.
- The major advantage of using message digests as a basis for determining authenticity is that they are essentially self contained.
- Contrasts with more elaborate methods such as digital signatures which are dependent upon the existence of availability and reliability of some associated public key infrastructure.

Document Management

- Following any duplication or comparison action clearly document
 - its basis,
 - any exceptional actions or recommendations and
 - a clear statement as to which copy or copies are to be regarded as authoritative until the next iteration.
- In this respect access to all classifications should be managed by a workflow system to facilitate auditing.

User Access

- Issues of
 - access,
 - auditing,
 - respect for intellectual property considerations,
 - commercial confidentiality
 - monitoring of judicial decisions to ensure authenticity and longevity
- demand a centralised body to manage and provide access for the system.
- However, advantage in multiple hosts especially in the context of free public access to law.

An Example

- In New Zealand the Ministry of Justice hosts Judicial Decisions On-line
<http://jdo.justice.govt.nz/jdo/Introduction.jsp>
- Other portals host decisions such as New Zealand Legal Information Institute
<http://www.nzlii.org>
- and the Court of New Zealand website
<http://www.courtsofnz.govt.nz/>
- Excluded are “pay-per-view” content hosts who have their own systems for longevity, authentication and content management

Executive Branch Involvement?

- The Executive Branch should not be involved
- Should be by a properly funded independent body
- Examples
 - Bailii in England and Wales
www.bailii.org
 - Austlii in Australia
www.austlii.edu.au
 - Singapore Academy of Law in Singapore
www.sal.org.sg

Access to the Cloud


- Should be single portal access to Cloud material
- Portal should provide documented and published means for other software to access and interact with it
- Provides gatekeeping functions as well as allowing a transparent way for a user to click on a link and automatically receive the download of the desired document.

Advantages of the Cloud

- Cloud provides
 - An offsite
 - indefinitely expandable
 - resilient and
 - secure place to store digital decisions
- Would become in effect a special purpose of archive of judgments.
- It may well be that other legal publications will seek to be located at such a facility in the fullness of time.



To Conclude

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- Decision makers should not feel constrained in their uses of new communications technology for expressing their decisions.
 - New technologies give Adjudicators greater control over the content of the decisions, allowing them to make choices about the extent to which content-rich digital decisions should be issued.
 - The ultimate goal is to ensure that the articulation of reasons is clear and transparent.
 - Where new technologies assist in this goal, they should be utilised.