

Presentation to the Pennsylvania House of Representatives Committee on Veterans Affairs and Emergency Preparedness

Protecting Our Legacy Document Infrastructure: Threats and Opportunities

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Background on the Problem

Much emphasis is placed on the benefits of electronic documents (the “paperless” office), but legacy hardcopy documents are still just as important, just as pervasive (if not more so), and just as vulnerable.

- Medical records,
- Real-estate transactions,
- Legal files (as well as evidence in criminal cases),
- Engineering drawings,
- Documentation for financial transactions,
- Personal papers (birth, death, and marriage certificates, wills, etc.).

We know to protect electronic documents via appropriate backup policies. Protection for legacy documents is much more ad hoc.

Aftereffects of Hurricane Katrina

Lives and history adrift on a soggy paper trail

LA Times (9-9-05)

Paper is everywhere in New Orleans — floating in the water, trapped in tree branches, ground into curbside mud. Millions of pages are soaked in courthouse basements, businesses and homes. Among the items are records of families, land ownership and commercial transactions, along with all the paper that charts the minutiae of everyday life.

In the basement of the Civil District Courthouse on Poydras Street, three blocks from the Superdome, water has lapped over 20% of the 60,000 leather-bound books of the New Orleans Notarial Archives. The books contain the records of all property transfers in the city that have occurred in the modern era.

"We don't have deeds in New Orleans," said Stephen P. Bruno, custodian of the archives. "Whatever our records say, that's who owns the property." ...

World Trade Center Tragedy

Buried drawings hampered rescue efforts

New Civil Engineer (9-27-01)

ENGINEERS WERE unable to call on vital engineering drawings of the World Trade Center for three days because the originals were kept in one of the collapsed twin towers, engineers told NCE this week.

Without engineering drawings of the six storey basement, engineers had to guess whether debris would support cranes and whether heavily

damaged buildings would stay standing ...

The drawings were stored on microfiches which are believed to have been in the Authority's office in the WTC towers at the time of the terrorist attack on 11 September.

"There was a lot of guesswork and we were having to make decisions by the seat of our pants," ...

"When you are guessing you are more cautious. Having those drawings straight away would have saved a lot of time, " ...

Hurricane Ivan (PA)

Disasters also hit closer to home:



Water being pumped out of lower level of building that houses Hellertown Borough Hall and Police Station.

<http://home.earthlink.net/~j2002b/ivan.html>

Hellertown loses thousands of records

The Morning Call (9-22-04)

Now thousands of official borough documents, including resolutions, meeting minutes and financial ledgers, lie caked with mud in a trash bin parked outside Borough Hall ...

Hellertown officials stored many of the borough's older documents in the basement of the municipal building ...

Steps Toward a Solution

Legacy documents form a crucial part of information infrastructure. They are at risk for the same reasons other aspects of our infrastructure are at risk: natural and man-made disasters.

- Study magnitude of problem (it is likely we underestimate it).
- Identify technologies that can be brought to bear to solve it.
- Must be cost-effective for municipalities, businesses, citizens.
- Adopt google philosophy – input everything into system, let software handle organizing it and delivery to end-user.
- Turn to research community (at Lehigh and elsewhere) to develop new technologies when needed (e.g., robust document analysis).

We cannot fail to protect information contained in these documents!