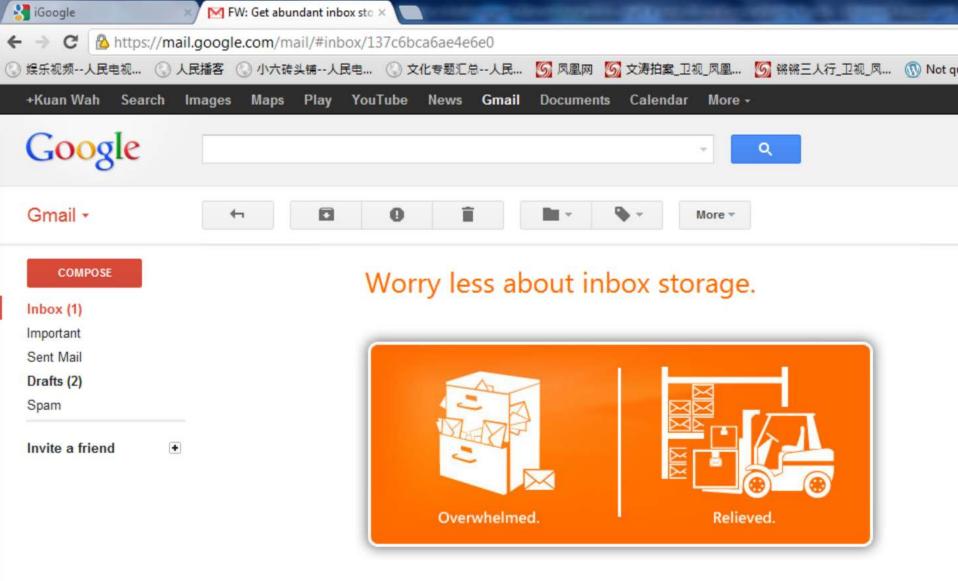
# MANAGING RECORDS (AND ARCHIVES) AS "RECORDED EVIDENCE" IN E-ENVIRONMENT

FROM AN ARCHIVIST'S PERSPECTIVE

a.k.a "那些年我搞电子档案的日子"

Pitt Kuan Wah

14 June 2012



Hotmail offers storage space that grows with you, from your collection of photos to RSVPs. So you don't need to delete emails to make space for incoming messages.



No, it is not just about managing digital or electronic records...

Yes, it is about managing records in an e-environment, which, of course, include records borndigital and digitised.

### 1993-2011

# A journey from imperfectly seizing the unknown to perfecting the known.

### Re-visiting the issue >10 years later...



### From understanding records management to reaching new frontiers in preserving eArchives





Pitt Kuan Wah National Archives of Singapore

EN

ish (United States)



# Revisiting My Three Advocacies (1)

- To manage digital records and archives, one must return to the basics of records management.
  - What are these guiding principles?
  - Effective records management programs require policies and procedures:
    - records as evidence to business transactions
    - life cycle recording keeping principles remains valid in eOffices
    - appraisal policy & retention scheduling are critical in eArchiving and can be "automated".
    - any system will fail without training and auditing

# Revisiting My Three Advocacies (2)

- IT tools related to good recordkeeping are within our reach today. We should deploy them to assist us manage and preserve digital archives.
- But always remember that a tool is a tool, it is only a mean to an end, not the end itself. Never be too obsessive about it.

# Revisiting My Three Advocacies (3)

- Archival concepts of "Uniqueness" and "Permanent" are fast changing in electronic records and digital archives preservation.
  - Archives Without Permanent
  - Not all digital-born records and archives must be preserved digitally
    - Problems associated with digital format and media
  - Output to paper may not be a viable option
    - Quality of modern paper and inks (preservation cost)
    - Space and other constraints (loss of context etc)
  - Direct transfer to microfilm: pros and cons

# What is New?

Interestingly, all three advocacies are still relevant....

The focus of my sharing today will be less technical (IT), but expand on the fundamentals of recordkeeping based on my last ten years of experience in implementing erecordkeeping systems.

One interesting lesson I learnt is that I no longer expecting a system that match my expectation.



29 February 2012 Last updated at 18:31

### Windows 8: Microsoft unveils consumer preview

### Microsoft has launched the preview edition of its next consumer operating system (OS), Windows 8.

281

Microsoft Windows 8 interface The Windows 8 interface resembles its smartphone equivalent

From today users of Windows 7 will be able to try out the "reimagined" software ahead of its full release.

The company calls it the most significant redesign of the Windows interface since its groundbreaking Windows 95 OS.

The system's design draws heavily on the "Metro" interface utilised on the current Windows Phone platform.

The Windows 8 developer preview launched late last year and brackeen downloaded more than three million times.

Windows president Steven Sinofsky said more than 100,000 changes had been made since the developer version went public.

**Related Storie** 

It is a good illustration of "work-always-in-progress" for IT software, including e-recordkeeping system.

Microsoft profits dow slight Windows 8 features picture login Microsoft unveils Windows Store

More important issue: how could we ensure that rolling out a new system will not have compatibility problems?

### This slide is not about the new Window OS.

# 1. Setting the Context

\*Records and Archives as Evidence (more than just historical memory) \*This (change of) perspective requires us to focus more on the record-making and keeping processes rather than the end product itself.

《礼记·大学》



How does this statement relate to managing records (paper or electronic)?

# The link is "Governance" (1)

Governance requires "proof"

## Demonstration of proof via:

Passive means: policy documents, code of conduct, set of rules, procedures (eg SOPs), measurement yardsticks (eg KPIs)..

Active means: willingness to enforce above..

# The link is "Governance" (2)

- Recordkeeping (regardless of form and format) is the key to prove:
  - Individual Level: you have done as expected of in your role as a citizen, an employee and a family member
  - Corporate Level: organisation's accountability to stakeholders and law makers/regulators
  - National Level: government's accountability to its people it governed
  - International Level: Inter (G-G) and Intra-national obligations

# Information alone is not sufficient as "proof"

TODAYonline PDF

online.com/PDFViewer/PDF/20120503/0305CAP016.pdf

民播客 🔇 小六砖头铺--人民电... 🔇 文化专题汇总--人民... 🌀 凤凰网

We suddenly lived in a **Huxley-ian world** where there was no truth, only narrative, and the people got flooded with such conflicting information that they either believed what they wanted to believe.... or tuned out completely from the entire process and stopped paying attention to any of the current events or caring about their outcome.

# When truth becomes a casualty

🕟 文涛拍案\_卫视\_凤凰... 🕟 锵锵三人行\_卫视\_凤... 🕥 Not quite an entry a...

Egypt's new-found press freedom has no accountability



### MAHMOUD SALEM

TODAY THURSDAY MAY 3, 2012 14

When writing this article, one is quite tempted to take the easy way out: Write about the importance of free speech, how a free press emboldens democracy and provide some sort of semi-horrifying/semi-inspirational anecdote about a journalist who was very brave and faced the odds and now everything is better and democracy stands triumphant, all because of a free press.

And quite naturally, since I am one of the New Media pioneers (remember when it used to be called just blogging? I miss that), not to mention a "voice of the Egyptian revolution", I am supposed to take this stand and advocate that position with all the might and power of the Jan 25 revolution.

I really want to, but ... I can't, because there is a problem in the premise and it is one that won't go away anytime soon.

It used to be easy to advocate this point of view. that of a simWe suddenly lived in a Huxley-ian world where there was no truth, only narrative, and the people got flooded with such conflicting information that they either believed what they wanted to believe or tuned out completely from the entire process.

or "centrist" journalistic institutions).

Then the revolution happened and there was suddenly no regime. That is when the fatal flaw showed its face.

The anti-regime newspapers suddenly had no regime to oppose or ministers to expose and the mediating newspapers suddenly had no regime to mediate for. It all went downhill very quickly. first to come to mind. And then things got worse.

### PRESS BECAME BATTLEFIELD

You see, this model presented the journalists of the old-regime a golden opportunity to do the same thing to revolutionary forces through their old or new media outlets, which led to a series of incredibly false and scandalous reports about the revolution's symbols, none of which they were ever held accountable for.

The press became a battlefield of conflicting false accounts and exaggerations, truth was the first casualty, and all credibility went out the window.

We suddenly lived in a Huxley-ian world where there was no truth, only narrative, and the people got flooded with such conflicting information that they either believed what they wanted to believe (whether it was "The revolutionaries are foreign agents" or "Mubarak still rules us") or tuned out completely from the entire process and stopped paying attention to any of the current events or caring about their outcome. ST The Straits Tin

EN 🔺 🏲 🔣 🧃

# At micro-level

Accountability to the individual/organisation has to be evidence-based.

Do we (still) have that evidence needed as proof? Was it by chance that we have it and able to locate? More importantly, does the information remain authentic (need proof again), is readable and understandable by today's technology?

# "A MEMORANDUM IS WRITTEN NOT TO INFORM THE READER BUT TO PROTECT THE WRITER."

Dean Gooderham Acheson (1893-1971) US Secretary of State



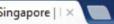
化策略位时报告》的推击,使乙埋安息识到 艺术节有潜力成为一个全民都能参与的艺术

### Likewise during "discovery" process there will be lots of queries and speculations that need answering...

- inferior and/or flawed design
- low quality of materials & failure to meet industrial standards
- poor workmanship & lack of supervision during implementation
- inadequate resources deployed during postimplementation inspection & maintenance
- unacceptable level of customer service, including putting clients at risk
- Do we have the necessary records to prove otherwise?

Commission of Inquiry into the massive breakdown of SMRT in Singapore in Dec 2011

Each of these queries needs records to support claim of corporate governance or the lack of it...



www.todayonline.com/Singapore/EDC120417-0000061/Finger-pointing-on-Day-1-of-train-breakdown-inguiry



LTA takes issue with SMRT's maintenance regime but operator says it is more stringent and goes beyond recommended standards

by Sumita Sreedharan

04:45 AM Apr 17, 2012

SINGAPORE - Even after the Government's legal representative made it clear that the public inquiry should be a "fact-finding" exercise and not adversarial, fingers were pointed over which party - the SMRT or the Land Transport Authority (LTA) - was to blame for the major train disruptions that hit the North-South Line on Dec 15 and 17 last year.

Yesterday was the first day of the Committee of Inquiry (COI) into the train breakdowns which affected more than 200,000 commuters.

The three-member committee, chaired by Chief District Judge Tan Siong Thye, heard opening statements from the Attorney-General's Chambers, the LTA and the SMRT as well as a report from the Criminal Investigation Department (CID), with Second Solicitor-General Lionel Yee pointing out from the start that the inquiry "is not an adversarial proceeding but a fact-finding one".

Nevertheless, LTA's lawyer Andrew Yeo, from Allen & Gledhill, took issue with the SMRT's maintenance regime which could be improved, although it was "comprehensive and satisfactory".

Citing a report by the transport operator's internal investigation team, Mr Yeo said: "SMRT's maintenance expenditure and manpower headcount for the maintenance of trains and trackways has not been increasing in recent years, at the same rate as the increase in kilometres travelled per train," said Mr Yeo.

According to Mr Yeo, SMRT records showed that there has been a reduction in the number of wheelprofiling works between 2009 and last year even though there has been an increase in incidents of wheel defects over the same period. He also said that SMRT's maintenance budget had not kept pace with the increasing ridership.

SMRT also "could do better" in terms of record-keeping, especially in the tracking of defects. "That would in turn enable any lapses or deficiencies in maintenance work to be easily detected and rectified," Mr Yeo added.

Where are the records that provide such information?

What recordkeeping system(s) allow such records be kept and retrieved for the COI?

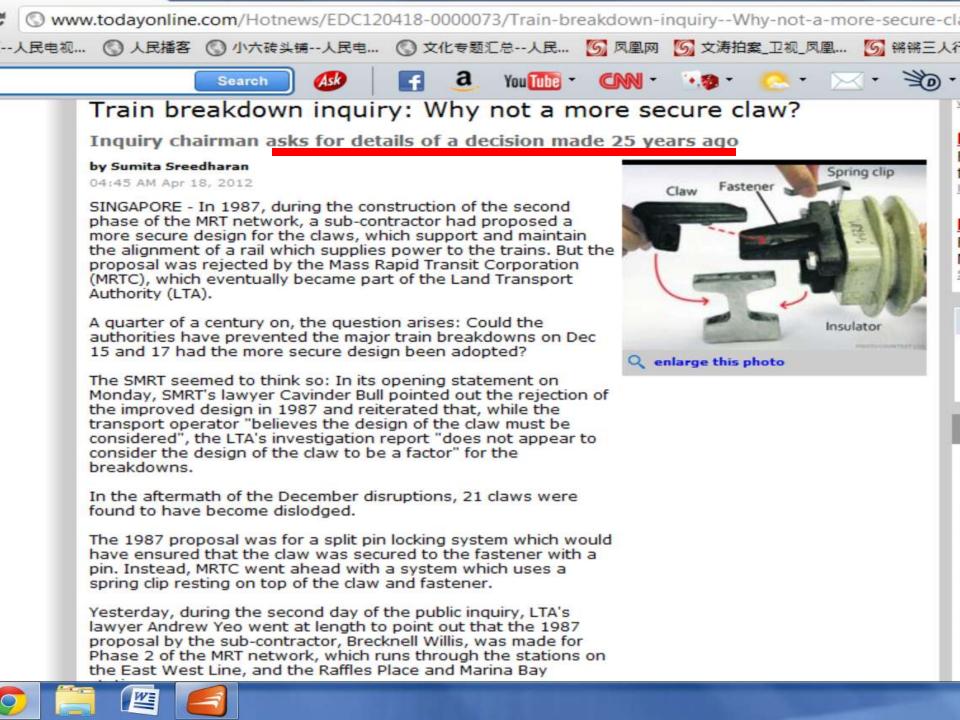
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Published on Apr 18, 2012 By Royston Sim & Maria Almenoar



Chief District Judge Tan Siong Thye, apparently unfazed by the technical details emerging in the inquiry into December's train disruptions, interjected at several points on Tuesday - at times to ask questions, and at others, to point out discrepancies.



Share

And in homing in on the key details, he made it clear where his committee's interests lay - in fact-finding, which was why he was more 'intrusive' than he would be in an adversarial trial, he said.

'If there are lapses, so be it ... We'll rectify it and life goes on.'



He said, however, that the Land Transport Authority, SMRT and the Attorney-General's Chambers would need to address the gueries he raised in the coming weeks.



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For the second time in two days, as head of a three-man committee, he zeroed in on key areas troubling him.

One is how SMRT's maintenance staff are able to spot defects in the third rail claw assembly, given that it is covered by an opaque fibre-glass casing.

He said he had 'grave doubts' that staff patrolling the tracks would know when a rail claw has come loose. He noted that these officers could not possibly open each and every cover when conducting their nightly

BACKGROUND STORY



**Chief District Judge Tan Siong** Thye on key areas troubling him:

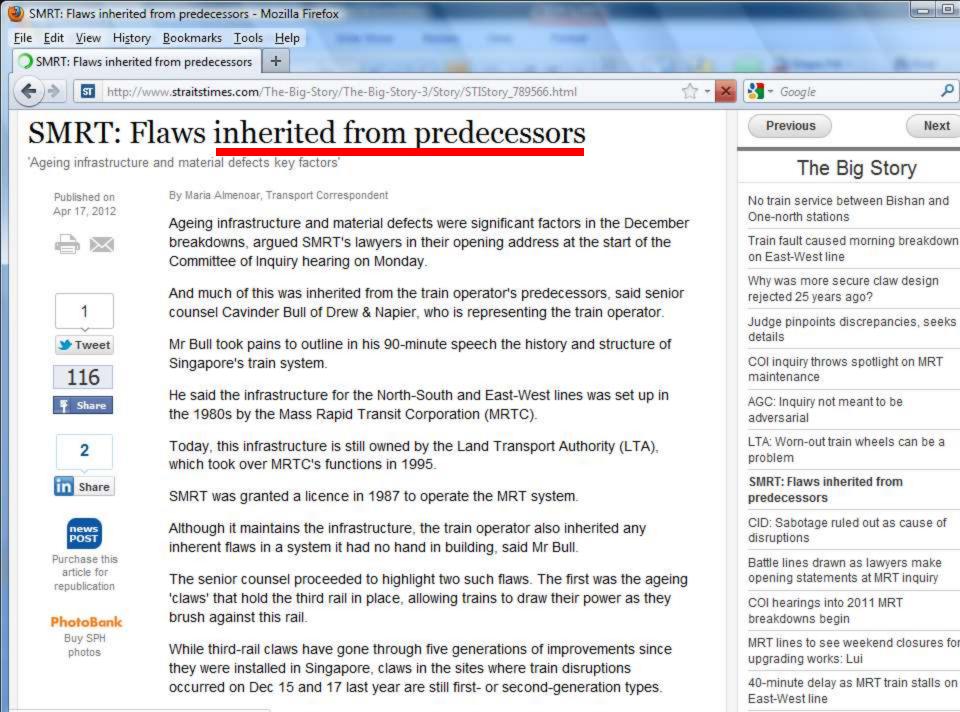
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CID: Sabotage ruled o disruptions	ut as cause of

Battle lines drawn as lawyers make opening statements at MRT inquiry

COI hearings into 2011 MRT breakdowns begin

MRT lines to see weekend closures for upgrading works: Lui

40-minute delay as MRT train stalls on East-West line





### MRT breakdown COI: Inspection done only after second disruption



By Maria Almenoar

SMRT only conducted a thorough fleet wide inspection of its trains after the second train disruption incident on Dec 17, the Committee of Inquiry heard on Wednesday.

This clarification was made when Second solicitor general Lionel Yee continued his questioning of ASP Roy Lim from the Criminal Investigation Department on day three of the public inquiry.

The committee was told that after the first incident on



SMRT staff measuring the distance between the collector shoe and third rail on one of the trains at the Bishan Depot at 5.30am on Dec 18. SMRT only conducted a thorough fleet wide inspection of its trains after the second train disruption incident on Dec 17, the Committee of Inquiry heard on Wednesday. -- ST PHOTO: LAU FOOK KONG



### The

Train drivers re incidents durir

Late again? G SMRT

Passengers a scrambling

Another break Line

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Train fault cau on East-West

Why was more rejected 25 ye

Judge pinpoin details

COI inquiry thr maintenance

AGC: Inquiry n adversarial

LTA: Worn-out problem

SMRT: Flaws i predecessors

CID: Sabotage

Dec 15 visual checks were done on all trains returning to Bishan and Ulu Pandan depot.

On the day proceeding, these checks were done on trains returning to all three depots including Changi depot.

These checks found five trains with damaged current collector shoes.





PhotoBank Buy SPH photos



By Maria Almenoar, Transport Correspondent



Published on

Apr 20, 2012









PhotoBank Buy SPH photos The two drivers on the trains with the most severely inconvenienced passengers during December's train disruptions revealed on Thursday that they had not been trained to deal with emergency situations.

Neither of them turned on the emergency ventilation switch that would have improved air circulation on board the stalled and increasingly stuffy trains.



But beyond this, the stories of what each of the two drivers did or did not do, making a difference for the passengers on their trains, emerged on Day Four of the Committee of Inquiry (COI) hearing on Thursday.

Mr Hardy Afandie, 45, a driver with 24 years of experience, found his train stalled between Somerset and Orchard stations on the North-South line on the evening of Dec 15.

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6:00 AM	Ex-C wror
6:00 AM	Top Spel
6:00 AM	Bud seat
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# SMRT chooses safety over reliability in maintenance routine



By Christopher Tan



 $\bowtie$ 







Purchase this article for republication Rail operator SMRT Corp focuses its maintenance regimen on the condition of the running rail instead of the power-supplying 'third rail'. This is because the former determines safety, and the latter, reliability.

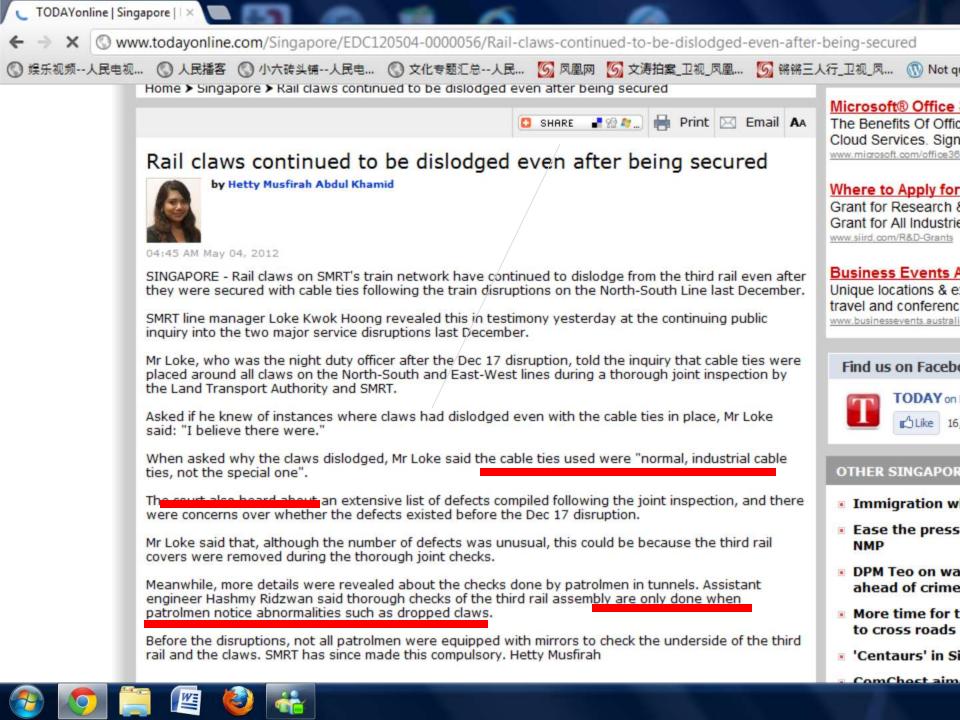
SMRT chief engineer Ng Chong Joo mentioned this no fewer than five times at the Committee of Inquiry on Monday. In the same context: although UPS manufacturer had recommended checking of UPS once every two weeks, SMRT management decided to do it once every three weeks...eventually it also affected customers safety!

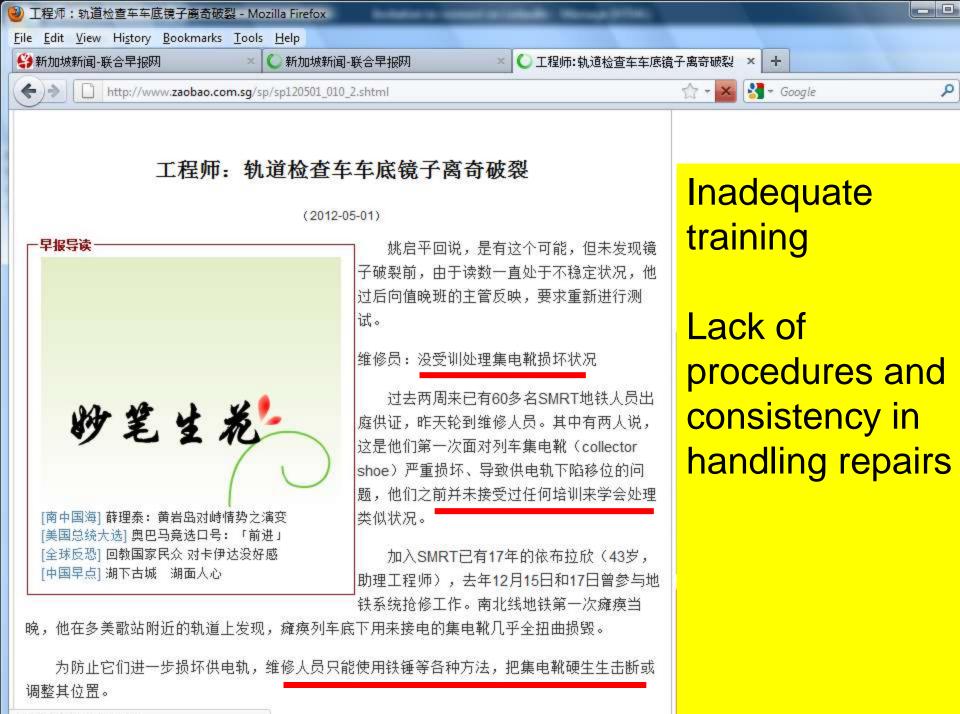
Mr Ng was questioned by the Attorney-General's office as well as by inquiry panelists on how SMRT maintained the third rail, as collapsed sections of it had caused the two major disruptions in December that affected more than 220,000 commuters.

The chief engineer said it boils down to safety versus reliability, and SMRT had to prioritise safety over reliability.

	Next
	Singapore
8:37 PM	MRT breakdown COI: SMRT chooses safety over reliability
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3:28 PM	HDB kicks off inaugural Community Week at Toa Payoh
2:32 PM	'Singaporean-ness' is abou respecting other cultures: IP study
6:00 AM	Former SGX chief Hsieh Fu Hua appointed new NCSS president







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### TODAY THURSDAY MAY 3, 2012 26

### SINGAPORE

TODAYonline PDF

民播客

"Mr Rashid Abdul Samat, among those inspecting the third rail power delivery system, testified that stretches recommended for rail inspection staff to check on were based on experience, as there was no protocol."

### Some aspects of SMRT checks had no protocol: Committee told

### OLIVIA SIONG oliviasiong@mediacorp.com.sg

SINGAPORE – There were no standard operating procedures in place when SMRT staff conducted passage checks on the train tunnels following the first train service breakdown on Dec 15.

This was revealed on Day 12 of the Committee of Inquiry (COI) hearing on the December train service disruptions.

Mr Rashid Abdul Samat, among those inspecting the third rail power delivery system, testified that stretches recommended for rail inspection staff to check on were based on experience, as there was no protocol.

He also said he and his team were ordered to do a passage check on top of a planned possession check. Passage checks are faster but speed would not have affected accuracy, he said.

He also confirmed that an error in the figures given to inspection staff might have prevented a fault in the third rail from being picked up.

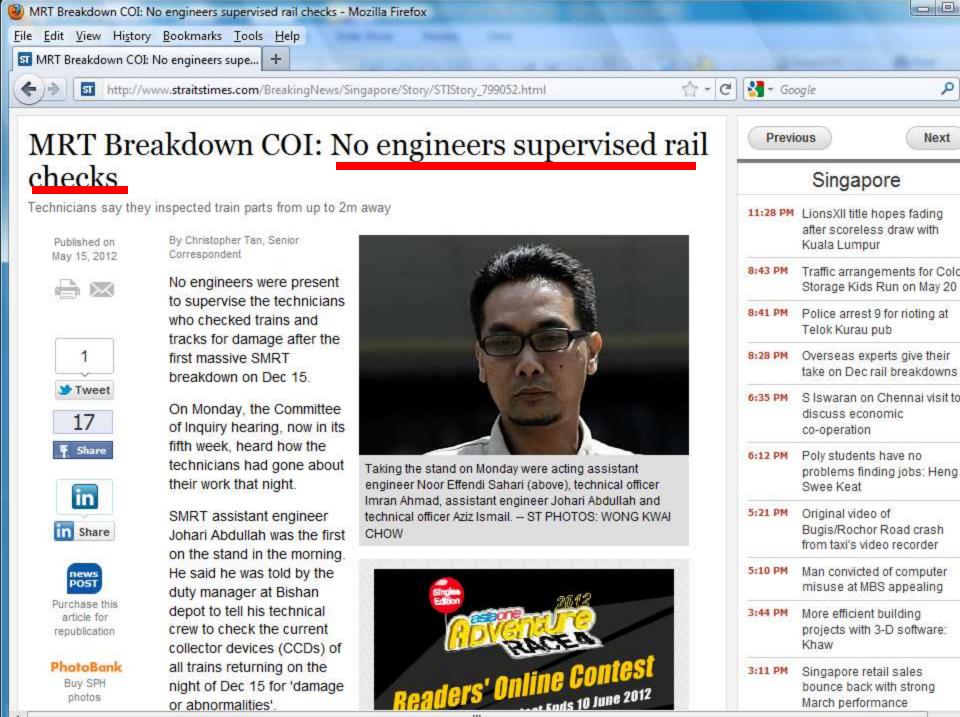
Both December disruptions had been caused by a section of the third rail sagging, damaging the collector shoes of several trains and resulting in them stalling,

Assistant engineer Yew Kai Ping had testified on Monday that he might have keyed in the wrong data, leading to a discrepancy in the numbers that instructed inspection staff on the areas to check on.

The thoroughness of inspection checks conducted by SMRT maintenance staff also came under scrutiny yesterday.

Mr Shamsuri Mohamad, one of the technical officers conducting checks on the third rail after the Dec 15 train disruption, said he and his partner conducted checks on 900m of track in about 20 minutes. The inspection covered a total of 210 items, including the rail claw assembly.

Asked by COI chairman Tan Siong Thye if a thorough check on the claws was possible in such a short period of time, Mr Shamsuri said he was confident defects were not overlooked and that no abnormalities were found during his checks.





### 客服组员事故近两小时后才抵现场

(2012-04-27)



SMRT只要求"尽快"报到

在列车发生故障、地铁站人满为患时,客 服组员在协助地铁站前线人员控制人群方面扮 演着关键角色。不过,SMRT的标准作业程序 只要求他们"尽快"到指定地铁站报到。

地铁故障听证会上昨天进入第九天。自 2001年担任客服组长的翁伟仁(53岁)昨天供 证时透露,去年12月15日南北线瘫痪当晚,他 在接获通知后的约一个小时抵达政府大厦转换 站,大部分组员则是在接到手机短信的一个半 小时后报到。

当晚SMRT是在晚上7时23分启动地铁事 故应变管理计划,他最后一个抵达现场的组员 则在接近10时才出现。

领导独立调查委员会的初级法庭首席地方法官陈祥泰问:"你会不会认为用一到一个半小时的 时间(报到)太长了?"

加入SMRT 26年、在审计部门工作的翁伟仁回说:"地铁事故应变管理计划并未规定客服组员应该要在多长时间内到地铁站报到,我没有权力指示他们要几点报到。"

### Lack of performance /delivery measures



# ...and back to the individual level....

Vews | 5 ×

v.todayonline.com/Hotnews/EDC120511-0000063/SMRT-had-planned-further-checks

◎ 人民播客 ③ 小六砖头铺--人民电... ③ 文化专题汇总--人民... ⑤ 凤凰网 ⑤ 文涛拍案\_卫视\_凤凰...

#### SMRT had planned further checks

But LTA wanted services to resume as soon as possible, ex-SMRT CEO claims



by Cheow Xin Yi

04:45 AM May 11, 2012

Singapore - After faults were rectified on the night of the first major train disruption on Dec 15 last year, rail operator SMRT had planned against resuming service to run further checks, but was asked by the Land Transport Authority (LTA) to resume services "as soon as possible".

This was told to the Committee of Inquiry by former SMRT chief executive officer Saw Phaik Hwa yesterday, who appeared as a witness to a packed audience on the 18th day of the hearing.

Ms Saw, who left SMRT last month in the wake of the public furore over the train breakdowns, added she was attending a function when she first heard about the disruption on Dec 15, which affected some 127,000 commuters.

She said she wanted to go to the site of the disruptions after she gave out all the staff awards, but was told by SMRT's senior vicepresident of communications and services Goh Chee Kong that everything was settling down with the sagged third rail restored.

Sometime after 9pm, Ms Saw received another call from SMRT executive vice-president of trains Khoo Hean Siang, who told her things were "under control" although he was not comfortable with resuming train services. Instead, he recommended to "run a more complete check", according to Ms Saw.

But, Ms Saw asserted, SMRT later received a directive from the LTA to run operations "as soon as possible" instead of shutting down for the night. "Of course, we comply with the regulator, so we had to recover the system ... (and resumed services) at 11.40pm," she testified before the inquiry.





**Q** enlarge this photo

Former SMRT chief executive Saw Phaik Hwa, who recently had a knee operation, leaving the hearing yesterday. Photo by Don Wong

When your bossStarted to shiftresponsibilities toyou, do you haverecords to proveotherwise?

"Prof Lim also quizzed Ms Saw on the basis for the 3-per-cent and **10-per-cent increases** in maintenance and staff costs over the past nine years, in which she responded that such budget allocations are decisions made by the engineers involved."

www.tremeritus.com/2012/05/13/under-saw-smrt-did-not-raise-its-maintenance-budgets-for-10-years/

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The Attorney-General's Chambers (AGC) on 10th May presented data at the Inquiry showing SMRT did not raise its maintenance budgets in nearly 10 years since 2002, despite rising ridership, more frequent train runs and ageing assets.

Former SMRT CEO Saw Phaik Hwa stoutly defended the SMRT's maintenance regime. She said SMRT had not only met, but exceeded, maintenance standards set out by rail manufacturers and the Land Transport Authority (LTA). Saw was taking the stand for the first time.



She claimed that money spent on mid-life upgrades for the trains had actually helped in saving maintenance cost.

She said, "We spent \$143 million for mid-life upgrade of 66 trains, that's why you see maintenance and repair costs coming down."

When it was pointed out to per that the upgrades were mainly for the train cabins and air-

She was then shown emails sent by board members asking management for an update on the board's concerns that there had been an increase in the frequency and duration of train breakdowns.

She said that nothing like that had happened before. Prof Lim then pointed out that the 'third rail' did sag in 2010 and before 2006. Saw said management was not aware of the seriousness of the events because the dropped claws were reinstated. To that, Prof Lim retorted, "You knew the risks, and you didn't do enough. You implemented cable ties."

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## At macro level

What are the laws and regulations that demand records to be kept – how long, how much, in what format (again, relates to authenticity and reliability)?

In other words, recordkeeping is not done in isolation. It goes beyond the organisation that created and kept the records...

## **Territorial Disputes**

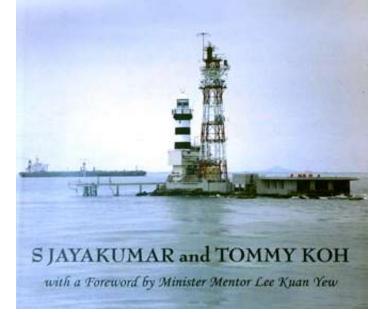
# Singapore-Malaysia South China Seas (China, Japan, Vietnam, The

Philippines, Malaysia and Indonesia)

"We maintain that, after acquiring sovereignty over Pedra Branca, the British and later the Singapore Government (as successor to Britain) undertook a full range of acts of sovereignty and jurisdiction on the island and its waters. These included: notices to Mariners; the constant maintenance and expansion of the facilities on the island including construction of jetties, a helicopter landing pad, radar and communications facilities; reclamation plans; the collection of meteorological data; the flying of ensign; numerous visits by high-ranking Singapore officials; control of access by Singapore of foreigners, including Malaysian nationals, to the island; the issuance of permits to third parties to undertake scientific research and salvage operations; the exercise of jurisdiction to investigate shipping incidents and accidental deaths; and more." (pp10-11)

### PEDRA BRANCA

The Road to the World Court





Published on Apr 17, 2012





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MANILA (AFP) - The Philippines and China traded fresh accusations on Tuesday of illegal incursions in a disputed area of the South China Sea, while refusing to compromise on their territorial claims.





The shoal is the same area where Chinese vessels last week blocked a Filipino
warship from arresting the crews of eight Chinese fishing boats.

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#### 菲拟要求国际海洋法院 审理南中国海主权纠纷

(2012-04-18)





(马尼拉综合电)菲律宾和中国船只对峙 事件持续了一个多星期还无法解决,菲律宾准 备将斯卡伯勒滩(中国称黄岩岛)主权纠纷提 交联合国国际海洋法法院(ITLOS)审理。

菲律宾外长德尔罗萨里奥昨天发表声明 说,全世界都知道中国拥有船舰和飞机的数量 超过菲律宾,"不过,我们希望彰显国际公法 才是最好的平衡工具.....这个行动的目的,是 要确定谁真正拥有斯卡伯勒滩四周海域的主 权。"

目前在斯卡伯勒滩(Scarborough Shoal)水域,一艘菲律宾海岸警卫船和两艘 中国海监船正在那里互相监视。

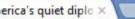
菲律宾指斯卡伯勒滩距离吕宋岛以西230 公里,位于沿海200海里的专属经济区内,受 到《联合国海洋法公约》(UNCLOS)承认, 但最靠近那里的中国领土是远在872公里外的 海南省。

据美联社报道,马尼拉的中国大使馆发言



**玉津账**份值计值时





O thecable.foreignpolicy.com/posts/2012/06/08/inside\_america\_s\_quiet\_diplomacy\_on\_the\_south\_chi

人民电视... 🛞 人民播客 🕓 小六砖头铺--人民电... 🕓 文化专题汇总--人民... 🌀 凤凰网 防 文涛拍案\_卫视\_凤凰... 🦉

In 2010, Secretary of State Hillary Clinton began an increasingly public U.S. effort to play a role in the resolution of the South China Sea disputes. The latest public display of that effort came at last weekend's 2012 IISS Shangri-la Security Dialogue, when Defense Secretary Leon Panetta outlined the U.S. position on how tensions in the South China Sea should be resolved.

"The United States believes it is critical for regional institutions to develop mutually agreed rules of the road that protect the rights of all nations to free and open access to the seas. We support the efforts of the ASEAN countries and China to develop a binding code of conduct that would create a rules-based framework for regulating the conduct of parties in the South China Sea, including the prevention and management of disputes," he said. "On that note, we are obviously paying close attention to the situation in Scarborough Shoal in the South China Sea. The U.S. position is clear and consistent: we call for restraint and for diplomatic resolution; we oppose provocation; we oppose coercion; and we oppose the use of force. We do not take sides when it comes to competing territorial claims, but we do want this dispute resolved peacefully and in a manner consistent with international law."

China signed onto a Declaration on Conduct of Parties (DOC) for the South China Sea in 2002, but that is a non-binding agreement meant to pave the way for more concrete Code of Conduct (COC). The negotiations on the COC are stalled. In response to a question in Singapore, Panetta gave even more detailed guidance on what the U.S. wants to see in the COC.

"Pursuant to developing that code of conduct it is very important that the ASEAN nations develop a dispute forum that can allow for the resolution of these disputes. It is not enough just simply to develop a code of conduct. You've got to back it up with the ability to negotiate and resolve disputes in this area. And that is what the United States is encouraging," he said. "It's pretty clear that every time these events take place that we always come very close to having a confrontation,

5

and that's dangerous for all countries in this region "



Peaceful resolution requires records as proof on the negotiation table or at the ICJ Court...

### End of the day, recordkeeping reflects accountability or the lack of it...



## Accountability

- The ability to answer for, explain, or justify actions or decisions for which an individual, organization, or system is responsible.
- Traditionally, records creation gives assurances of reliability and authenticity, and therefore of trustworthiness, a quality essential to giving of and holding to account.
- Accountability required the development and refinement of **procedures** for carrying out actions and documenting them, 'to ensure that everything was done **according to rule and in proper sequence**, so that administrators could account at any time precisely for anything that had been done. Effective institutional accountability has therefore depended on **record-making**, **recordkeeping and access to records**, and it has influenced the procedures and timing of their creation, their form, their maintenance, their accessibility and their centralization.

## Translating it into "actions"

- □ What was done (and not done)
- □ When was it done (and why not other time)
- □ Where (and why not elsewhere)
- Why was it done (what were the other options not chosen)
- □ Who did it (and under whose instruction)
- How was it done (how much, how frequent and how successful)

### 2. The ABC of Recordkeeping System

Recordkeeping affects the quality of recordness (which may render them useless as evidence)

Remember: The devil is in the details - process determines outcomes...

"碱水面没过过冷河,所以面里面全是碱水味。鱼丸也没有鱼 味,但是你为了掩饰,特别加上了咖喱汁,想把它做成咖喱鱼 丸。但这么做太天真了,因为你煮的时间不够,咖喱的味道只 在表面上,完全没有进到里面去,放进汤里面鱼丸就被冲淡了。 好好的一颗咖喱鱼丸,让你做得是既没有鱼味又没有咖喱味, 失败!萝卜没挑过,筋太多,失败!猪皮煮得太烂,没咬头, 失败!猪血又烂稀稀的,一夹就散,失败中的失败!最惨的就 是大肠了,里面根本没洗干净,还有一坨屎,你有没有搞错?"





# Essential elements of a good recordkeeping system..

- Standard metadata information that provide direct link to authenticity, accuracy and trustworthiness of the recorded information:
  - Content
  - Structure
  - Context
- What is "context" from an archival perspective?
  The Obvious: agency, creator and users, date(s)
  The Not-So-Obvious: related records (could be in other media, forms)

The ABC of Recordkeeping

## The Three Absolutes

i. Recordkeeping does not mean keeping all records forever

Keeping what records? How much?

For how long? In what format(s)?

### WHETHER YOUR RECORDKEEPING SYSTEM ENABLES YOU TO KEEP RECORDS DEPENDS ON:

\* HOW WELL YOU ARE ABLE TO DEFINE WHAT RECORDS

\* HOW THEY ARE TO BE CAPTURED

Where should you draw your reference from?

Typical essential records related to:

 Functional/operation needs (immediate delivery of goods and services)

 Auditing needs (compliance to regulations, discharge of obligations)

Legal needs (in defence of corporate governance)

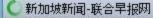
Corporate memory & branding (being trustworthy, reliable, good track records etc)

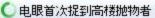
# In other words, recordkeeping must address the following:

- Need to know what are records and archives (and differences in perspectives). Increasingly records could be in audio and audio-visual formats (as defined by laws) and must be appraised together with their text-based "brothers and sisters" fonds.
- From archival perspective, records ought to be "arranged" in a meaningful way so as to protect their "recordness" - authenticity, accuracy, reliability etc
- Time dimension in Keeping and Preserving (and the measurement of time)
- □ Technology dimension (closely related to time and preservation options)
  - eg Ektachrome slides will fade over time, part of the appraisal decision may have to address the question: is it worth spending resources to preserve these slides in their original form or migrate the content to something else ?
  - Likewise for digital records in proprietary formats such as CAD drawings, Lotus Note emails etc.

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哈斯敏去年6月从武吉巴黎组屋把烟蒂丢下楼,被电眼拍个正著。(国 意环境局提供) 随手把垃圾从组屋窗口往外扔并不少见, 但29岁的哈斯敏大概不会想到,他半夜随手丢 个烟蒂会被逮个正着。

原来,国家环境局安装在该组屋对面的电 眼已经"等"了他五天,终于拍到他丢垃圾的画 面。

这名过去有丢垃圾行为的男子,昨天被传 控上庭,成为第一个被环境局电眼逮到而被控 的垃圾虫,他被罚款800元。

他被控于去年6月25日凌晨零时31分,在 武吉巴督33街第328座组屋犯下高楼抛物的违 例行为。

案情显示,环境局接获该座组屋数名居民 的投诉,指有人经常从三楼或四楼的单位丢下 烟蒂。其中一名事主说,她晾在厨房窗外的衣 服经常被楼上扔下的烟蒂烧破洞。

环境局决定派出高级稽查员负责展开调 查,密切监视这座组屋的高楼抛物情况,但几 天下来一无所获。去年6月20日,环境局在该 座组屋对面的屋顶装置闭路电视,监视三楼的 其中一个可疑单位。



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#### CCTVs to curb piracy at more cinemas

Operators install devices to deter illegal recording; 18 reported cases of patrons using gadgets to film clips



0, 2012









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#### By Bryna Sim

Pirates who secretly record movies in cinema halls could find themselves being recorded instead, as more cinema operators turn to closed-circuit television (CCTV) cameras to nab offenders.

Shaw Theatres, which runs six cineplexes here, is the latest operator to install these devices. It recently put in CCTV cameras in its new multiplexes in nex and

JCube shopping malls, as well as older halls that have been renovated such as Lido.

Shaw's vice-president of media, Mr Terence Heng, said the CCTVs served multiple functions: as a piracy deterrent, for troubleshooting technical issues, and for reviewing disputes with customers.

He added that patrons are informed that the halls are monitored by CCTV cameras in a message flashed before the start of the movie.

TO READ THE FULL STORY ....



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#### Police install high-tech cameras to fight crime

Devices part of new network that will extend across island in future



By Jalelah Abu Baker

across the island.

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Buy SPH photos High-tech security cameras are being installed in the first phase of a new network that will eventually extend

More than 10 have been fitted in Jalan Bukit Merah, in a move that will give police a fresh tool to help tackle crime in the estate.

Unlike ordinary security cameras, the new system is designed to capture people both entering and leaving the area.

Residents in Jalan Bukit Merah are hoping that the technology will rid them of the loan shark runners who have defaced debtors' doors, targeted neighbouring flats and vandalised motorbikes.

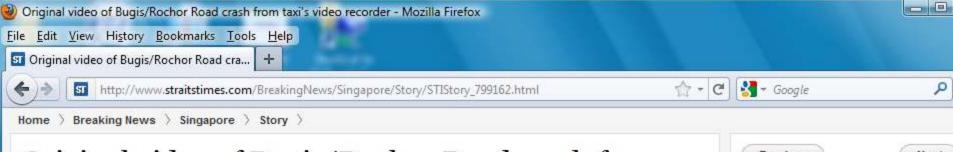


Contractor R. Ravichandran installing a camera system in a multi-storey carpark in Jalan Bukit Merah. The Community Policing Systemis part of a new police strategy that aims to make full use of technology. --PHOTO: JOSEPH NAIR FOR THE STRAITS TIMES



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## Original video of Bugis/Rochor Road crash from taxi's video recorder











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Buy SPH photos View the actual footage of the Rochor Road accident from a taxi driver's in-car video recorder.

Some 15 seconds into the video, the light turns green. The taxi with the in-car camera moves off the line, but the other ComfortDelGro taxi is faster. The ComfortDelGro taxi is about two car-lengths ahead when a sudden blur of red dashes across and smashes into it, causing a loud and sickening crash.

Please be warned of the graphic content in the video.



A screengrab of the actual footage of the Rochor Road accident from a taxi driver's in-car video recorder. – PHOTO: RAZOR TV



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#### China says only it has right to monitor air pollution Record

Published on Jun 6, 2012









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BEIJING (REUTERS) - A senior Chinese official demanded on Tuesday that foreign embassies stop issuing air pollution readings, saying it was against the law and diplomatic conventions, in pointed criticism of a closely watched United States (US) embassy index.

The level of air pollution in China's heaving capital varies, depending on the wind, but a cocktail of smokestack emissions, vehicle exhaust, dust and aerosols often blankets the city in a pungent, beige shroud for days on end.

Many residents dismiss the common official readings of 'slight' pollution in Beijing as grossly understated.

The US embassy has installed a monitoring point on its roof which releases



A view of downtown Shanghai on a hazy day is seen on May 15, 2012. A senior Chinese official demanded on Tuesday that foreign embassies stop issuing air pollution readings, saying it was against the law and diplomatic conventions, in pointed criticism of a closely watched United States (US) embassy index. – PHOTO: REUTERS



**Records** may have a political dimension which has nothing to do with technical elements or "recordness" of accuracy, reliability and trustworthiness, or even authenticity..

# ii. A good recordkeeping system must include appraisal function

Determining the values of records in different stages of record lifecycle: as they are created, being used and becoming semi-current and non-current:

Short Term: usually relating to fiscal obligation

Short to Medium Term: administrative/operational and legal

Long Term or Indefinite: Historical records

## Capturing Appraisal (Disposition) decisions

- That is the difference between a recordkeeping system and most of a document management system
- More important to have this feature in eRecordkeeping environment
  - Enable better deployment of limited resources

### Deciding government records...

- Importance of the ministry/department/agency within government hierarchy: policy vs administrative (supporting) vs operational
- Breath and diversity of the agency (mandates and functions): regulatory, registration, investigative, sponsoring, communications, marketing, research, active operation. Generally speaking, >functions=higher value

- Size and complexity of the agency which usually translate into the level of impact on society through its activities, and therefore the higher the potential of having records of enduring value.
- For government-wide subjects, there could be duplicate/overlapping records (eg press releases), it is necessary to trace the source of provenance and keep only these.
- It is not necessary that routine records must always have short retention as they could be a vital source during discovery/Inquiry related to corporate governance matters.

To re-phrase Shakespeare's famous quote:

## 'TO KEEP OR NOT TO KEEP, THAT IS **NOT** THE QUESTION.' (HAMLET)

# Consistency is the key benchmark of a good appraisal decision

- Appraisal should lead to a consistent selection of records for keeping and destroying – records from the same business activity and serve the same purpose are retained for the same period and likewise destroyed after the same period. Good appraisal is based on routine procedures and rules which are consistently applied.
- These routines make appraisal outcomes more predictable and any mistakes easily traced and corrected.
- □ The last point means appraisal is not a one-off exercise!

### Appraisal Outcome: Retention Schedule

- Developing retention schedule is a key activity in recordkeeping as it is the bridge between current, semi-current and non-current (archives) recordkeeping stages.
- Need periodic updating to reflect changes in functions (and the implied responsibilities) of records creators.
- Taking bearing from related/relevant legislations, typically Evidence Act, Income/Corporate Tax Act etc.
- Timely (actual) disposition of records (destroyed & archived) is essential.

iii. A recordkeeping system is unlike information or document management system, must include a subject classification scheme

\*Based on functions/activities of the creating agency

\*Not just for the purpose of easy to retrieve/locate the "filed" records

\*Because records (unlike documents) are only meaningful (and unique) when they are look at from two perspectives: In the context of other records created by the same activity overtime, eg capturing in other formats (eg audio, audiovisuals) How individual record items have been assembled or aggregated (eg arranged into a "file") as and when they are created "[RECORDS] LOSE THEIR SIGNIFICANCE IF THEY ARE DEALT WITH AS A SINGLE ITEMS RATHER THAN AS COLLECTIVE UNITS. PUBLICATIONS [LIBRARY MATERIALS], ON THE OTHER HAND, HAVE A MEANING THAT IS NOT DEPENDENT ON THEIR RELATION TO OTHER ITEMS. EACH PUBLICATION STANDS ALONE."

T R Schellenberg, The Management of Archives, p 67 The ABC of Recordkeeping

### The Two Broad Guiding Principles

### i. Understand Realities

The world is not perfect. Same for all recordkeeping environment. Need to manage expectations

Reality-check is an essential thinking process in designing/adopting a recordkeeping system.

# Knowing the vulnerability of modern records is equally important!

- Implementation of an electronic recordkeeping system cannot take off without adequate infrastructure: regulated power supply, reliable computer hardware and software and communications networks to ensure noninterrupted transactions and retrieval of such records whenever it is needed.
- What does reliability really means?

How do we translate it into measureable requirements or specifications?

### ii. Make use of existing tools

### "工欲善其事,必先利其器。居是邦也,事 其大夫之<mark>贤者</mark>,友其士之仁者."《论语·魏 灵公》

事 = recordkeeping 器 = vision, policies & procedures 贤者, 仁者 = record creators, administrators, alliances (increasingly IT personnel).



# Laws and Regulations in Recordkeeping (legal and administrative mandates)

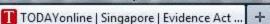
- In many countries, RM is part of a key function of their national archives
- It does not mean that without legislation, one should not care about recordkeeping!
- Other ways working around include establishing formal arrangement between agencies and archives as the latter is always considered a trusted "3<sup>rd</sup> Party" in keeping corporate history.

As Laws and Regulations are always changing, recordkeeping policies and procedures must be updated/upgraded correspondingly...

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BUSINESS	Changes to Evidence Act proposed
SPORT	By Ambiga Raju   Posted: 30 September 2011 1747 hrs
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FEATURES	SINGAPORE: The Ministry of Law is proposing amendments to the Evidence Act (EA) to
HEALTH	allow computer output evidence to be treated just like all other forms of evidence.
SPECIAL REPORTS	The EA defines "computer output evidence" to mean not just computer print-outs, but also any statement or representation whether in audio, visual, graphical, multi-media, printed,
30 DAY ARCHIVE	pictorial, written or any other form which is produced by a computer or translated from a statement or representation so produced.
Search news	Currently, computer evidence is subject to a higher threshold for admission because of concerns over reliability.
BLOGS YOURNEWS	This applies to documents and print-outs generated by computers, digital sound and video recordings produced by computers and metre readings from electronic devices.
<ul> <li>iPhone App</li> <li>BlackBerry App</li> <li>Android App</li> <li>Mobile News</li> <li>RSS</li> </ul>	The ministry said stricter requirement imposed on such computer output evidence since 1996 is no longer justified because of technological sophistication. It added the higher threshold requirement has also presented difficulty, inconveniencing parties seeking to admit electronic evidence in court proceedings. Another key proposal is on expert opinion.
eNewsletter	Evidence is currently restricted to just five areas of specialised knowledge: "Foreign law, science or art, handwriting or finger impressions".
TWITTER	The proposal is to extend this to include evidence on scientific, technical or other specialised knowledge.
Follow us on Twitter	The ministry said the current limitations are unnecessarily restrictive in the Singapore context, which no longer adopts a system of j trial.
FACEBOOK	It added judges are capable of appreciating the subtleties of expert opinion evidence.
f Find us on Facebook	The two other proposed changes are to extend the benefit of legal privilege to in-house legal counsel and to broaden and align the categories of admissible hearsay evidence for both criminal and civil proceedings.

TODAYonline | Singapore | Evidence Act changes passed - Mozilla Firefox

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T http://www.todayonline.com/Singapore/EDC120214-0000175/Evidence-Act-changes-passed



#### Evidence Act changes passed



Updated 09:25 PM Feb 14, 2012

by S Ramesh

SINGAPORE - Singapore's Parliament on Tuesday passed amendments to the Evidence Act which gives the courts the discretion to consider relevant evidence by widening the admissibility of several categories.

These include computer output evidence, hearsay evidence, and opinion evidence.

A rule on the evidence of character in rape cases was repealed, an issue which had been brought up by the women's organisation, AWARE.

Moving the second reading of the Bill, Minister for Law K Shanmugam said the Office for Women's Development under the Ministry of Community Development, Youth and Sports had also given the ministry feedback that this amendment ought to be made.

He told the House that before the amendments to the Evidence Bill were finalised , views from several quarters had been sought.

Among them were professors at the Law Faculty of the National University of Singapore and other legal stakeholders.

Mr Shanmugam said: "These sets of amendments represent today, what we believe to be the best balance we can strike between the use of helpful hearsay evidence and the risk of presenting unreliable evidence before the courts.

"The net result of the amendments is that the courts will have a broader but still structured discretion to deal with hearsay evidence so what we are doing now is not, therefore, to allow in what was previously not allowed but to give the courts the discretion to sieve through the evidence to see which part to be allowed if the judge believes that to be in the interest of Justice in the particular case.

"So we should not approach these cases and the approach to evidence as a series of technical hurdles for the prosecution to jump.

"We must also remember that there is the interest of society in allowing the evidence.

"The judge is in the best place to decide what is relevant and we in Parliament should set out the framework. The fundamental purpose behind this is not to change the ultimate golden thread which is



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- Rule of law must be adapted to f

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<b>1</b>		<ul> <li>(b) by deleting the definition of "document" (including the <i>Illustrations</i>) in subsection (1) and substituting the following definitions:</li> </ul>	
100	5	" "document" includes, in addition to a document in writing —	
e		(a) any map, plan, graph or drawing;	
		(b) any photograph;	
	10	<ul> <li>(c) any label, marking or other writing which identifies or describes anything of which it forms a part, or to which it is attached by any means whatsoever;</li> </ul>	
	15	<ul> <li>(d) any disc, tape, sound-track or other device in which sounds or other data (not being visual images) are embodied so as to be capable (with or without the aid of some other equipment) of being reproduced therefrom;</li> </ul>	
	20	<ul> <li>(e) any film (including microfilm), negative, tape, disc or other device in which one or more visual images are embodied so as to be capable (with or without the aid of some other equipment) of being reproduced therefrom; and</li> </ul>	
	25	<ul> <li>(f) any paper or other material on which there are marks, impressions, figures, letters, symbols or perforations having a meaning for persons qualified to interpret them;</li> </ul>	
🦗 (I)	30	"electronic record" means a record generated, communicated, received or stored by electronic, magnetic, optical or other means in an information system or transmitted from one information system to another"; and	

### What does "Part of Routine Operation" mean?

- Normal but last minute
- Apply across and not isolated and being selective repeatability is an essence
- Regular audits and not only when trouble has come
- Corrective actions and documentation as proof of "normalcy"
- Organisational wide and not only confined to management
- If operation is out-sourced, the vendor must also follow same practice

# Illustration on "regular course of business" records

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#### Illustration

A seeks to adduce evidence in the form of an electronic record or document produced by an electronic device or process. A proves that the electronic device or process in question is one that, or is of a kind that, if properly used, ordinarily produces that electronic record or document. This is a relevant fact for the court to presume that in producing the electronic record or document on the occasion in question, the electronic device or process produced the electronic record or document which A seeks to adduce.

(2) Unless evidence to the contrary is adduced, the court shall presume that any electronic record generated, recorded or stored is authentic if it is established that the electronic record was generated, recorded or stored in the usual and ordinary course of business by a person who was not a party to the proceedings on the occasion in question and who did not generate, record or store it under the control of the party seeking to introduce the electronic record.

#### Illustration

## Approved process means...

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1 1 1	(5) The Minister may make regulations providing for a process by which a document may be recorded or stored through the use of an imaging system, including providing for
1:	(6) Where an electronic record was recorded or stored from a document produced pursuant to an approved process, the court shall presume, unless evidence to the contrary is adduced, that the electronic record accurately reproduces that document.
20	<ul> <li>(7) The matters referred to in this section may be established</li> <li>by an affidavit given to the best of the deponent's knowledge and belief.".</li> </ul>
	New section 128A
	14. The Evidence Act is amended by inserting, immediately after section 128, the following section:
2:	Communications with legal counsel in entity

**128A.**—(1) A legal counsel in an entity shall not at any time be permitted, except with the entity's express consent, to

## Authentification



(b) by deleting Illustration (c).

#### New section 67A

**11.** The Evidence Act is amended by inserting, immediately after section 67, the following section:

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#### "Proof of documents in certain cases

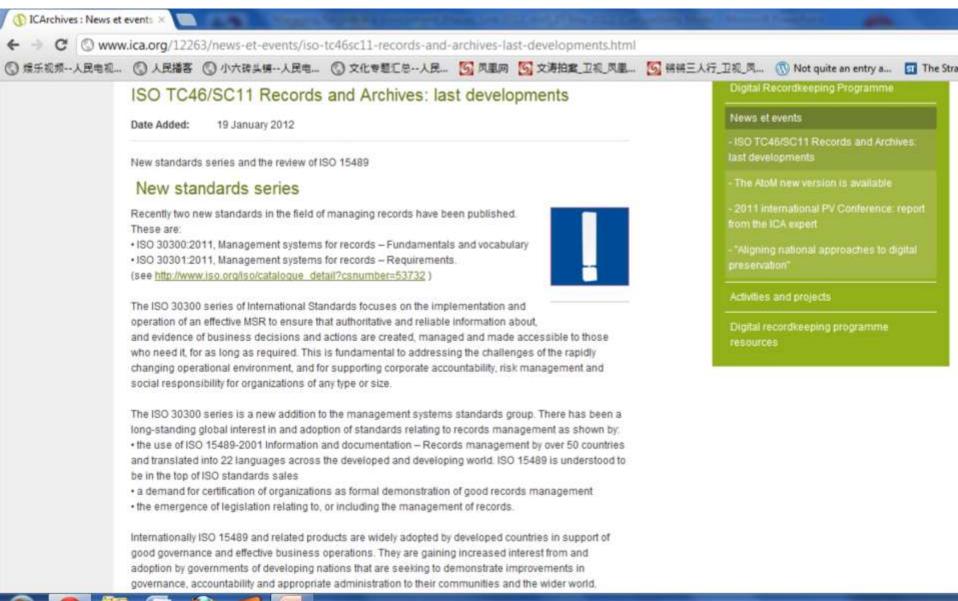
**67A.** Where in any proceedings a statement in a document is admissible in evidence by virtue of section 32(1), it may be proved by the production of that document or (whether or not that document is still in existence) by the production of a copy of that document, or of the material part of it, authenticated in a manner approved by the court.".

#### Amendment of section 68A

12. Section 68A of the Evidence Act is amended -

- (a) by deleting the words ", computer output or other explanatory material" in subsection (1) and substituting the words "or other explanatory material, in electronic or other medium,"; and
- (b) by deleting the words "in any form, including computer output" in subsection (3)(a) and substituting the words "in

# Standards (national & international) could be another type of tools to be tapped..



# Standards (national & international) could be another type of tools to be tapped..

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		ISO 3272-6:2000 Microfilming of technical drawings and other drawing office documents – Part 6: Quality criteria and control of systems for enlargements from 35 mm microfilm	90.93
		ISO 4087:2005 Micrographics Microfilming of newspapers for archival purposes on 35 mm microfilm	<u>90.93</u>
		ISO 6148:2001 Photography Micrographic films, spools and cores Dimensions	<u>90.93</u>
		ISO 6199:2005 Micrographics Microfilming of documents on 16 mm and 35 mm silver-gelatin type microfilm	<u>90.93</u>
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The ABC of Recordkeeping

# A Cautious Approach

Imperfectly Seizing the Unknown

**My Approach** 

# **KISS** and **HUG Principles**

## The KISS

# "Keep It Simple, Stupid"

- Keeping records is a chore to many, keeping record filing procedures simple (and easy) will help encouraging willing minds.
  - It helps if the design is based on existing work habits rather than a completely new set of rules
- End of the day, it is also how the system would work that matters most rather than how impressive it may look.

# The HUG

- □ Hybrid is likely to be the way to go reality is that we are unlikely to toast away paper and other forms of records (audio and audio-visual) in our collection holdings.
- Utilitarian functions based on needs rather than desire (20% effort solving 80% problems)

□ Generic (and open) as far as possible to ensure easy records (and metadata) migration/export

# The Three (obvious) Options

- Build from Ground Zero (1980s belief, via ISP (information system planning)
  - we have more time, more resources
  - there aren't that many choices
- Buy ready-made (many users ended up with information (at best document) management systems
- Adopt and Adapt lots of customisation & integration and some degree of new development works

# Build from ground-zero or adapt something ready-made?

- How unique are your requirements (security, functionalities etc)?
- □ How big are you (that you could command compliance)?
- How must resources (not just \$\$\$) can you afford to pour in?
- Going open source is increasingly the norm, but to me it is more important to ensure the records (content & metadata) could be exported/migrated out accurately.
  - Like buying fire insurance for your house, what kept inside could be more valuable than the shell!



# Out-source or in-house?

 "Ask not what the vendor (or solution provider) can do, but what he or she could do to meeting the needs of the organisation (immediate, nearterm and long-term)



- Security consideration
- Urgency (may not be within one's control)
- Cost effectiveness
  - Cost (including maintaining it)
  - Manpower resource (turn-over, knowledge & skills being retained/expanded/updated)

# My views (based on practical experiences - including mistakes made)

- A mixed of strategy of outsource and in-house is inevitable for most agencies, for good performances (speed, reliability etc).
- Core competency & Mission may not warrant building a system in-house
- But without knowledge, how does one QC what the vendor did and how to direct direction and expectations?

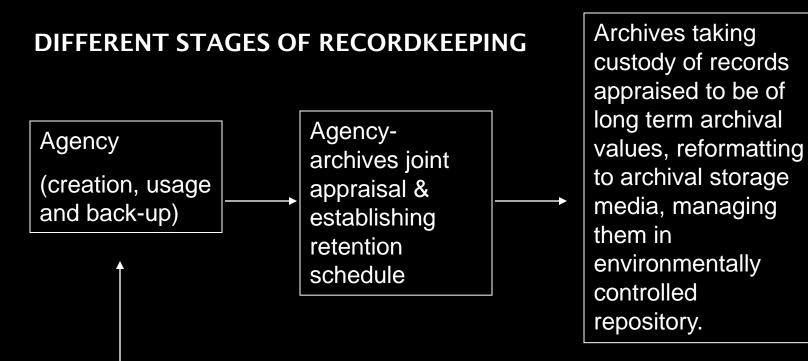


## Be sustainable:

- Is not once-off (big or small) investment of building it
   can you afford to maintain it at reasonable recurrent cost?
  - Keeping records in digital form may seem cheap as storage cost has been increasingly lower for the last decade
  - Hidden costs could be high the ability for long term access due to rapid technological changes (media, format, integrity of recorded information etc)
- Is not only able to meet current (as built) functional and operational needs – can it cater to changing needs within reasonable timeframe? More importantly, can the records be migrated out and remained authentic, accurate and reliable?
- Is not entirely depended on it (all eggs in one basket)
   what is your parallel back up system?

#### Illustration of a e-recordKeeping system based on email records as the dominated form of business transaction

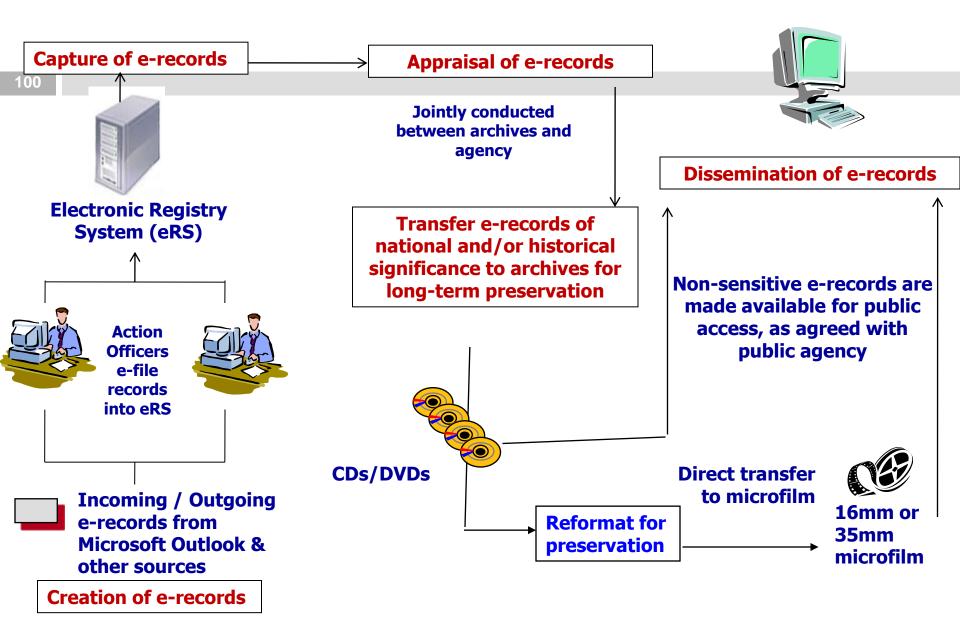
- Implemented in Apr 2006 (rested on Lotus Notes email platform), current version (2.x) supports MS Outlook.
- Comply with ISO 15489 Records Management Standard. Seamless integration with email system and allow ease of efiling and searching of emails as part of agency's record keeping system.
- Improve work processes by reducing clutter and mailbox quota in officers' workspaces, when records which have been e-filed are deleted from officers' workspaces
- Enable NAS to set retention period and disposal action for important e-folders at the creation stage which will eventually be archived for permanent preservation.
- Security features include measures to prevent action officers to amend records once they have been e-filed into the system, audit trail of transactions stating action officers who e-filed and deleted records, officers who viewed, copy, retrieved records from the system as well as those who created new file titles and new roles in the system, converting emails to graphic format.



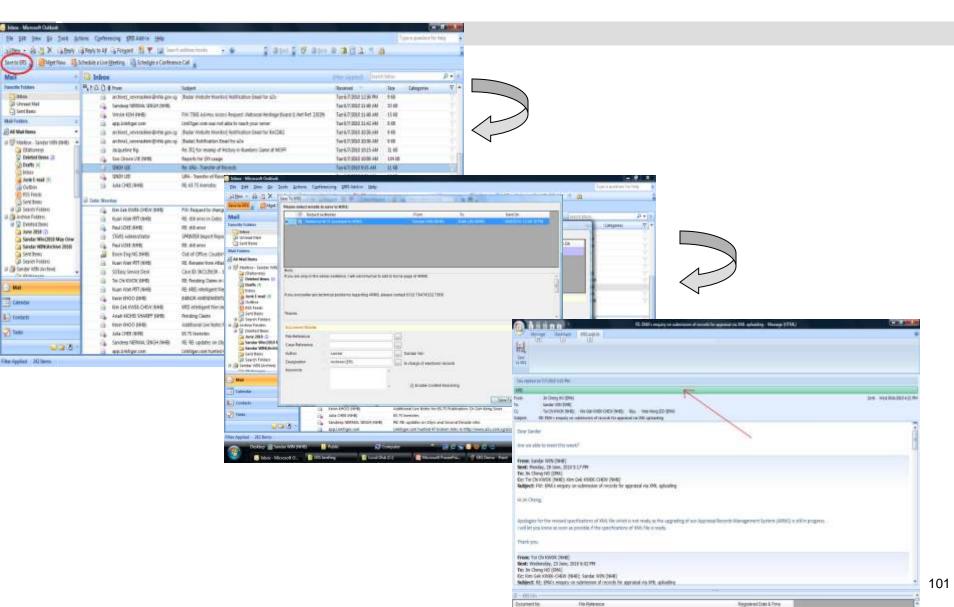
Archives should advise filing, classification system & records format(s). When necessary, storing of backup copy of vital records to reduce risk

Future Reference

#### **Workflow & Connectivity**



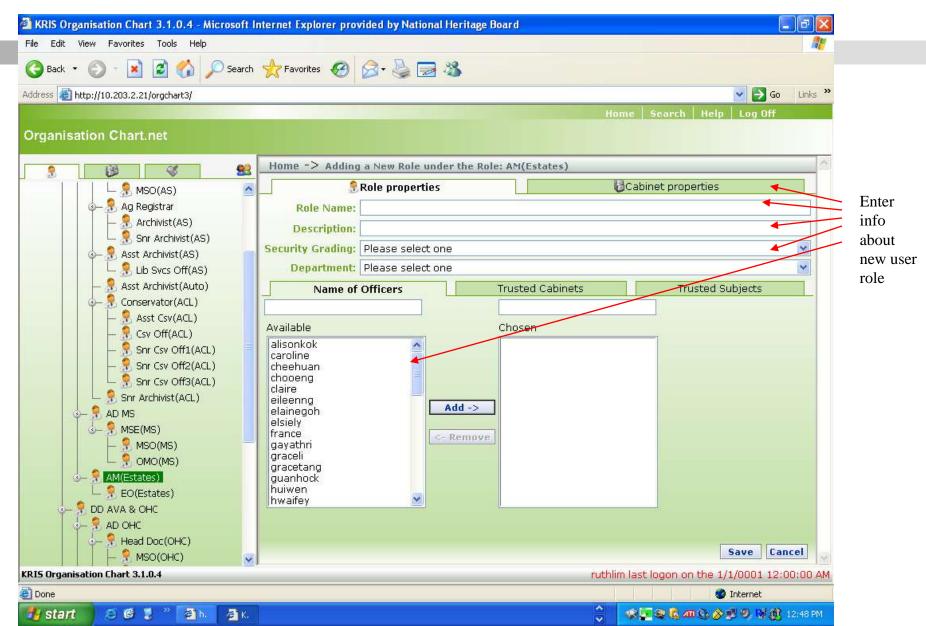
#### Illustration: Filing of email directly from Microsoft Outlook (2009-)



#### **Illustration:** Filing of email directly from Lotus Notes (2006-2009)

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### **Role-based..**



### **Roles link to subject classification**

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### Role and classification link to access

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# Access and security

- Are records being protected against unauthorised access, changed or substituted? And for how long?
- Levels of access should be role-based and linked to classification scheme
  - Viewing metadata of records only
  - Viewing records (of varied security grading) only
  - Viewing records + output (download/copy, printing)
  - Viewing records + output + request for deletion due to misfiling or duplicate filing
  - Deletion of records with audit trail (usually for system administrator only)
- Use of electronic lock/ encryption ought to differentiate between the need to authenticate access integrity during transmission vis-àvis long term access – otherwise it is as good as locking the archived records using a key made of dry ice!

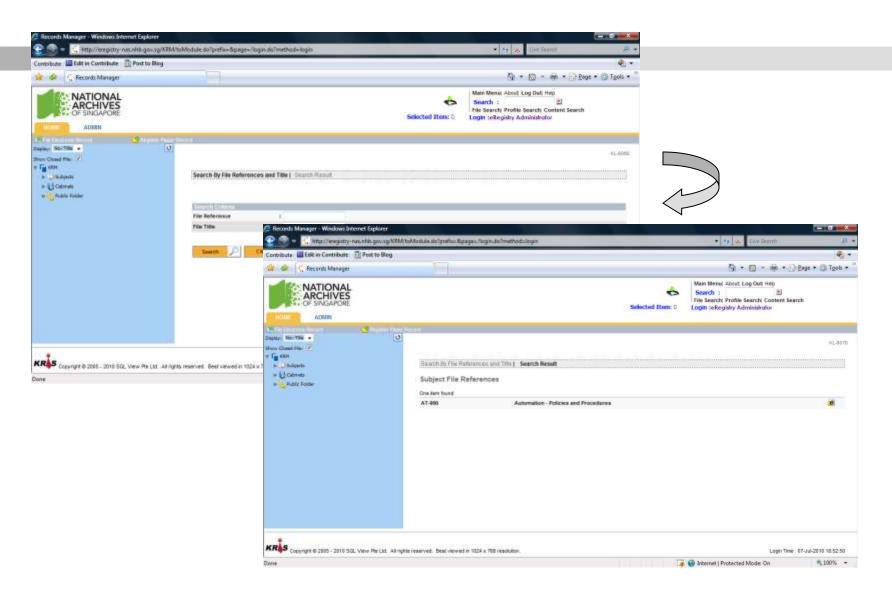
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#### Search modes cater to different levels of retrieval



# Based on "habit" again...

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Recently Accessed Files ranks top

## Uncommon/proprietary File Formats

- To be inclusive or exclusive? ("It's the economy, stupid!")
- Need to exclude so as to prevent technological time locks:
  - rpmsg (Restricted-Permission Microsoft Outlook e-mail message);
  - dat (Generic data file) created by a specific application; typically accessed only by the application that created the file; may contain data in text or binary format;
  - text-based DAT files which can be viewed only in a text editor
  - Zipped files (need to be unzipped before e-filing)
  - technically complex databases such as GIS and 3D architectural models

## What about the "backlog"?

A question always asked....

### A story of "More is Less"

The Story of Peking University's three iconic landmarks



### Universal Checklist for Recordkeeping System

- Conforms to law legal and statutory obligations
- Supports corporate governance accountability and transparency
- Complies with standards and codes of practices (ethical or industry-based)
- A recordkeeping system may not necessary cater to archival needs (long term access to records beyond the minds of record creators). Is that your responsibility too? If not, at least should provide a gateway to facilitate transfer to the archives (whether internal or state archival body)
- Longer term view beyond administrative and legal requirements as information need may continue to exist, be it in its original shape or reformatted form. This will be covered in the next few slides.

What does "preserving" dynamics (hyper-link, formula etc) of electronic records really mean from the archives perspective?

- □ How long could them last?
- How to resolve dead-link issues in a real (progressive, moving on etc) world that hardly bother to look back?
- The difference between knowing the (once) existence of the link (and what purposes does it serve) vs keeping alive the link forever

# One coin, two sides?

Longer term view – beyond administrative and legal requirements as information need may continue to exist, be it in its original shape or reformatted form.

This is not the same as backing up of vital records!

# 3. Preservation OptionS

a.k.a risk management from an archival perspective

HOME » NEWS » WORLD NEWS » AUSTRALIA AND THE PACIFIC » AUSTRALIA

# Julia Gillard's shoe held to ransom by Aborigine protesters

Aborigine protesters have brandished the shoe lost by Julia Gillard as she was rescued from a violent rally, claiming they want it to be the symbol of a move to "give us back our country".



"I'm in the fortunate situation where I am a woman with a few pairs of shoes."

-Julia Gillard Australian PM



Using the "shoes" analogy in the management of modern records and archives...





- It is unrealistic to expect a ready-made or even made-to-order electronic record keeping application that could meet all needs within an organisation, let alone across the entire civil service.
- It is highly probable that one has to buy many pairs of shoes in his or her lifetime.
  - All digital solutions become dated as soon as they are implemented, majority have relatively short lifespan due to technological obsolescence or changing functions/workflow.



- One will probably need to wear other footwear besides shoes.
  - Records created digitally need not be managed digitally throughout the entire record lifecycle. We cannot count on digital media and formats to fully meet long term preservation needs – reliability, authenticity, accuracy, trustworthiness of records and their carriers. We should focus on the records rather than the technologies.

### 黑纸白字的时代尚未过去。。。

### Singapore News Alternative



Home Opinion Videos SNA Election News

#### Friday, January 06, 2012

Hordes of worried customers flock to DBS and POSB branches after news of fraudulent withdrawals spread

#### Yahoo! Singapore News, 6 Jan 2012



Snake-like queues were spotted at DBS and POSB branches and passbook update machines around the island on Friday morning after DBS said it is investigating a total of over \$200,000 worth of unauthorised withdrawals.

Online customers also reported having encountered difficulties in logging on to their internet banking accounts since Thursday night.

When Yahoo! Singapore dropped by the POSB branch at Tanjong Pagar, a queue of around 40 people was spotted with most of the customers checking for potential fraudulent deductions from their bank account. Full story

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#### PA Grassroot leader. More suicides in Bedok. Reservoir after Workers' Party win

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#### What Bioggers Say

#### TR EMERITUS

#### Temasek Revealed

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### 'Paper Trail: the unloading of boxes of documents part of the total of 270,000 pages - at the Supreme Court for the NKF

case.'

### NKF lawsuit battle lines drawn

Questions to be addressed os trial aparti today

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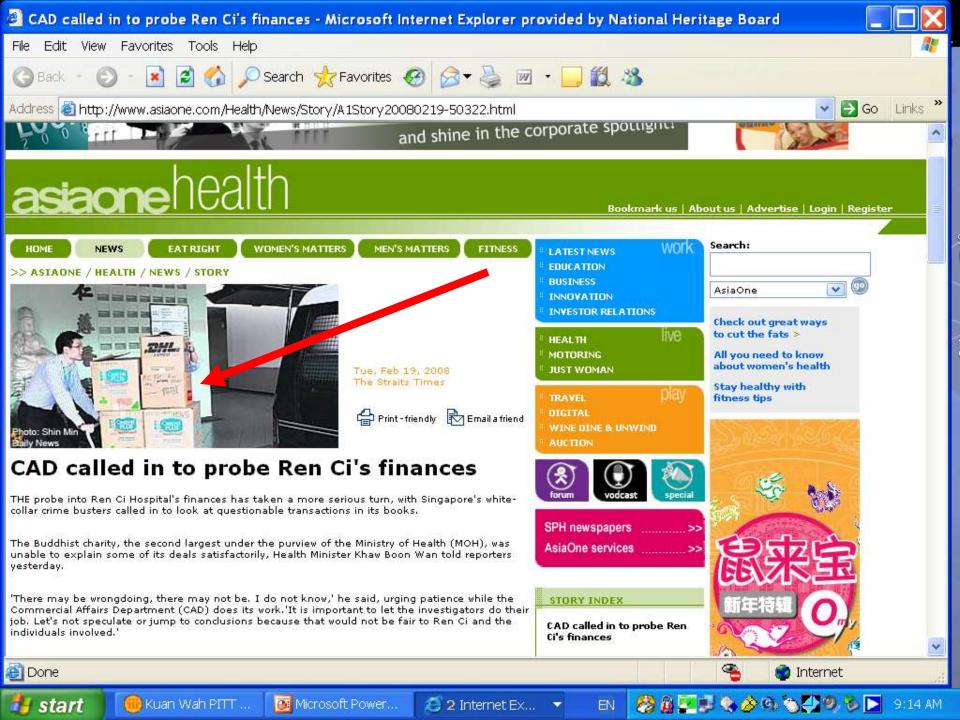
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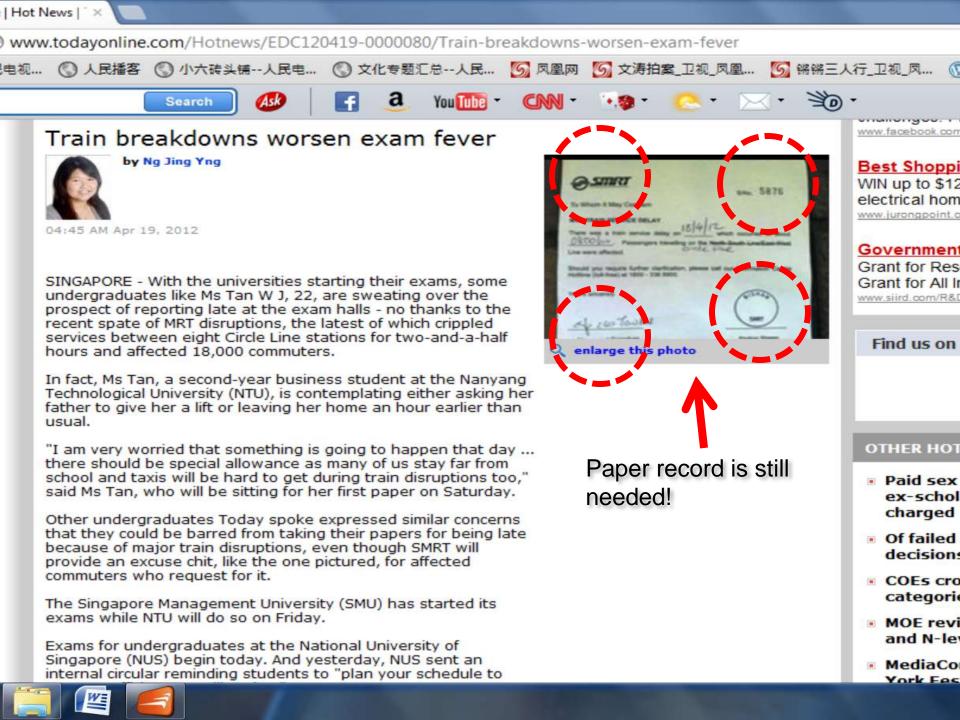
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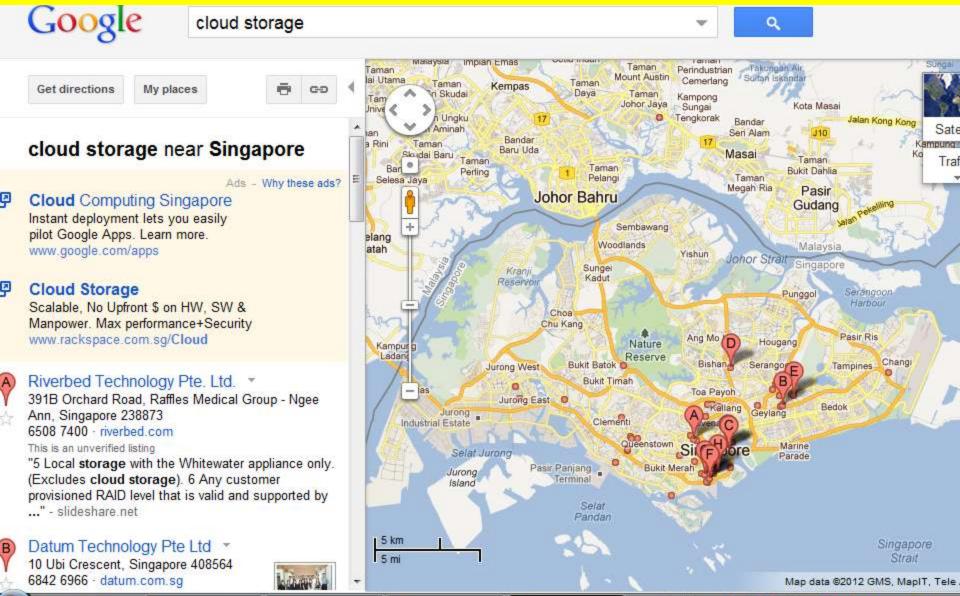
# 你被搞云(晕)了吗?

## Keeping records in virtual space

- Not so much a technical issue...as technology has already arrived and maturing by days.
- Nor cost (although many see it that way), as it is also dropping by days.
- But a matter of trust (reliable, secured, etc).
- And risks that need balancing – wrong access, no



# It is after all, not too abstract and physically out of reach...



### Between the devil and the deep blue sea

### Grid

- Originates from academia
- Federation of super computer to yield processing power
- Cross-organizational sharing, thus security is also a prime concern
- Diversity in nature: good (reuse of existing hardware) and bad – scalability and stability resulting from mixed of OS etc)

### Cloud

□ Promoted by IT industry, commerce service, thus usually a single-service provider, also high degree of "standardisation" (good and bad)

### Sharing of information resource is not the same as preserving information for long term access

#### WORLD SINGAPORE NEWS A- A+ BUSINESS SPORT IDA urges S'pore businesses to take up cloud computing Posted: 15 May 2012 2255 hrs TECHNOLOGY ENTERTAINMENT Recommend <74 > Tweet < 43 In Share 3 + Share 12 FEATURES HEALTH SINGAPORE: The government is taking the lead when it comes to the adoption of cloud computing. SPECIAL REPORTS The Infocomm Development Authority Singapore (IDA) said it has awarded a key tender to 30 DAY ARCHIVE allow Singapore's first private computing cloud infrastructure for all government bodies to be rolled out by the end of this year. Q Search news SINGAPORE With cloud computing, data and IT services can be retrieved via Internet applications and available on demand. BLOGS To provide cloud computing resources across the government, the IDA has awarded its first 1 of 1 < 11 Photos YOURNEWS Government Cloud - the G-Cloud - tender to SingTel for five years, with an option to extend for another five years. iPad & iPhone App Besides being efficient and scalable, the G-Cloud will allow government agencies to deliver BlackBerry App services securely and quickly on demand. Android App It will also bring about cost savings through the standardisation and sharing of computing Video Mobile News resources and applications. IDA urges S'pore RSS RSS According to a study commissioned by IDA, Singapore is ranked third after Australia and businesses to take up eNewsletter Japan, in terms of cloud adoption in the Asia Pacific region. cloud computing IDA said it will continue to roll out various initiatives to encourage companies to adopt cloud TWITTER computing. twitter Besides launching its fifth call for Cloud Computing Proposals, IDA said they are also working to address cloud security concerns. Follow us on Twitter Khoong Hock Yun, assistant chief executive officer (Infrastructure & Services Development Group) at IDA Singapore, said: "We have FACEBOOK worked with the IT standards committee to put in place various guidelines on use of cloud computing for end users as well as service

Find us on Eacobook providers. We are also at the same time working on a standard which hopefully can be an auditable standard so that when end users look at a company, as senting with a convisite compliance to standard, they will feel a touch "



# Archivists would look at each of the three Ss differently...



# IF THERE IS ONE WORD THAT COULD SUM IT UP....

# **TRUSTWORTHINESS** 诚信

Archives (as a physical place) remains a trusted hub – back to the Roman concept of public.

### ALTHOUGH THE WORLD TODAY IS A VERY MUCH A CONNECTED ONE, NOT EVERYTHING CONNECTED OUGHT TO BE CONNECTED.

Recordkeeping functions should be resided in a backbone system and best separated from a dynamically changing record generating/business transaction system (eg email, app submissions, corporate web etc) for obvious reasons.



# Remember: unauthorized access does not confine to hacking

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### Protect my medical records better, please [2012] 13 Jan\_ST

Title: Protect my medical records better, please

Source: Straits Times

Author: Salma Khalik

### Legal News Archive

SINGAPORE is rolling out a national electronic health record system that will be accessible to all medical practitioners.

The idea is for each patient to have just one set of medical records, which will list all his treatments, medication and allergies.

This way, any doctor treating him, whether in a hospital or as an outpatient, and in both public and private sectors, would have access to his medical history.

This is an important move that will benefit patients. But, more has to be done to protect the security of that data.

Right now, there is already some sharing of medical records between public hospitals and polyclinics - but on a limited basis.

The national electronic health record (NEHR) scheme, expected to be fully up by 2015, will also involve the private sector, step-down care facilities like nursing homes, pharmacies, and the military.

The rationale behind the move makes a lot of sense.

Previously - and to a certain extent, even today - a patient moving from one hospital to another, or even from a polyclinic to a hospital, would need to have his X-rays, scans and various test results transferred by hand. This could take a couple of days. Sometimes, bits of paper and test results would get misplaced.

Occasionally, instead of going through the hassle of requesting for information from a different institute, or in view of time constraints, doctors would find it simpler to get the patient to do the tests again. Having the information stored electronically, and at the fingertips of the attending doctor, removes all this hassle.

But the recent incident where a doctor at the KK Women's and Children's Hospital (KKH) accessed the electronic system to look up the medical records of two former girlfriends - who were not his patients - has raised some worrying questions.

His 80 unlawful incursions were discovered only because the second woman knew about it and complained to the hospital. If she had not, his actions, which took place between 2007 and 2009, would likely have gone unnoticed.

So where is the vaunted patient confidentiality that the Ministry of Health (MOH) promised when records went electronic?

When questioned in Parliament on this in 2007, then Health Minister Khaw Boon Wan said the problem of confidentiality also existed with paper records. He spoke of an employee who was sacked because of such a breach, but did not give details.

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### Doctor fined \$10,000 for spying on patients' records

He accessed files of two not under his care

Published on Jan 6, 2012

By Jalelah Abu Bakar

In the first such case here, a doctor from the KK Women's and Children's Hospital (KKH) has been fined \$10,000 and censured for accessing the electronic medical records of two patients not under his care.



These patients turned out to be the ex-girlfriends of Dr Singh Tre'gon Randhawa, 32.

Dr Singh, who was then a medical officer, spied on the records of the first woman

in 2007 after he learnt that she was seeking treatment for a suspected sexually

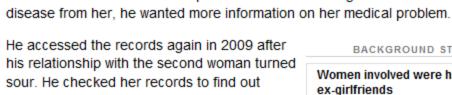
transmitted disease at the hospital. Worried that he might have contracted the

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when she had appointments at the hospital, so that he could avoid hostile run-ins with the woman who threatened and stalked him.

#### BACKGROUND STORY

Women involved were his ex-girlfriends

- In 2007, Dr Singh Tre'gon Randhawa, who was then a medical officer, spied on the records of the first woman after he learnt that she was seeking treatment for a suspected sexually transmitted disease at the hospital. Worried that he might have contracted the disease from her, he wanted more information on her medical problem.
- He accessed the records

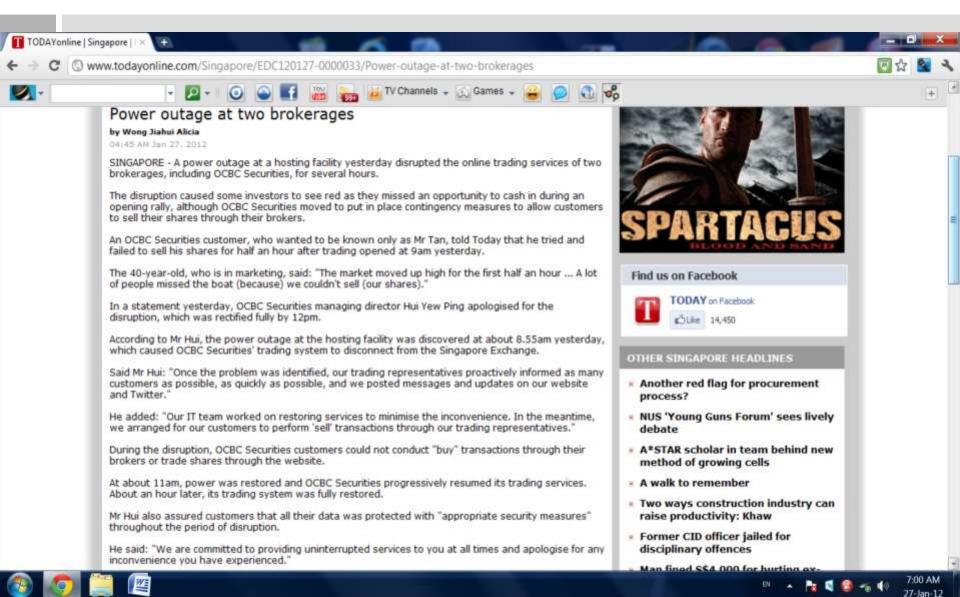
Regardless what level the hype is about digital preservation, accessibility is still a major concern..

- Accessibility is not just about physical availability of the medium which stored the recorded information.
  - (issues of retrieval and durability of media)
- Accessibility in the wider context means the recorded information could be *comprehensible, understandable*.
  - (issues of hardware, software, format)

More importantly does the recorded information remains authentic, reliable and accurate?

□ (issues of recordness and preservation strategy)

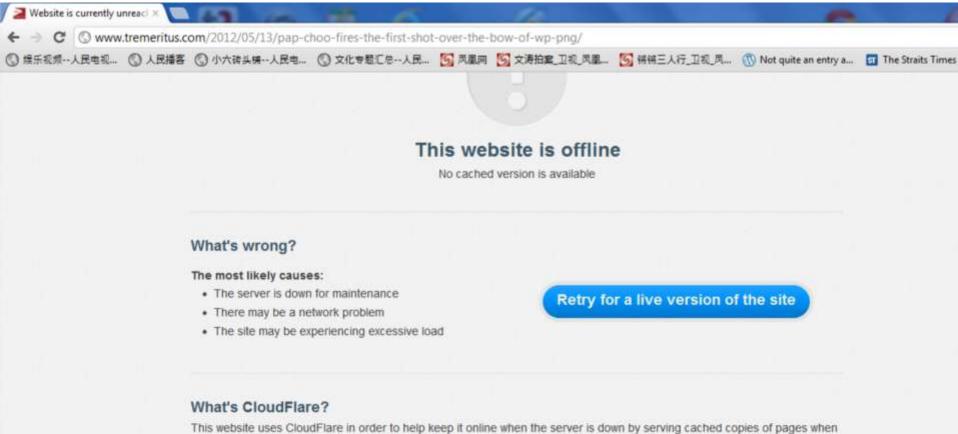
# Access to e-records (including transactions) can be more challenging..



# UPS ALONE IS NOT ENOUGH...INSURANCE CANNOT BE THE CURE...

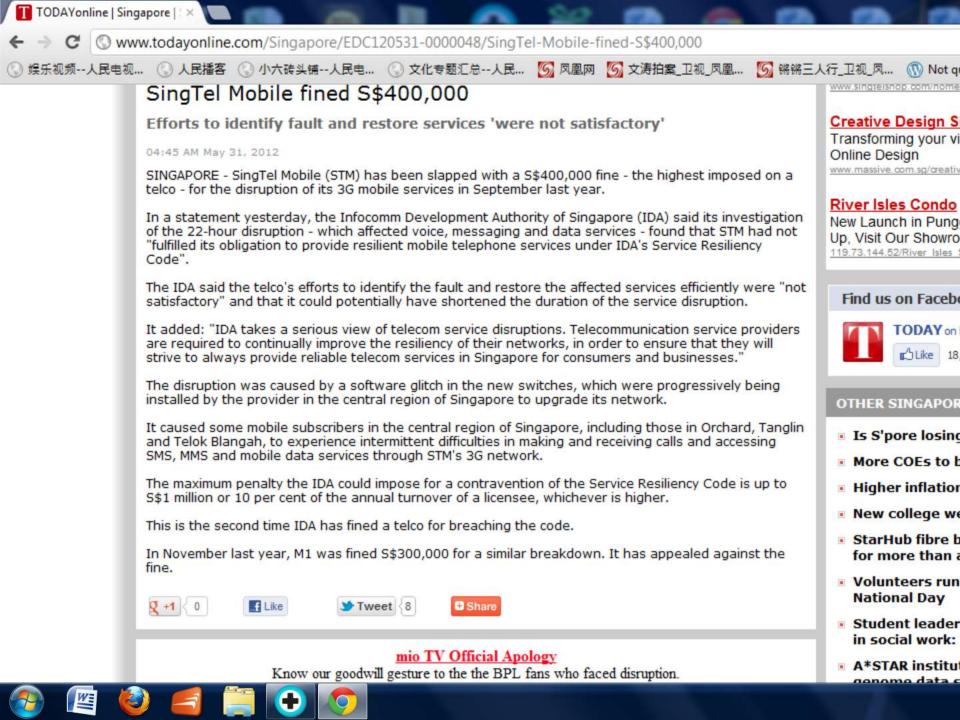


### More than just power supply. It is about connectivity as well.



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### Why keeping (some) records in nondigital medium is still relevant?

- Fundamental to the concept of a record: Is it possible to have a record in fluid form and with undetermined boundaries - interactive and dynamically changing mode?
- Should an entity with fixed form and stable content be generated for the purpose of making a record to be kept in a trusted recordkeeping system and perhaps preserved over the long term?
- In common sense, it simply means whether it is wise to put all the eggs in one basket?
  - A more practical question to ask should be what are the records that required backup to a more durable and trusted medium like archival quality microfilm?

Illustration

# MICROFILM AS "RECORDED EVIDENCE"



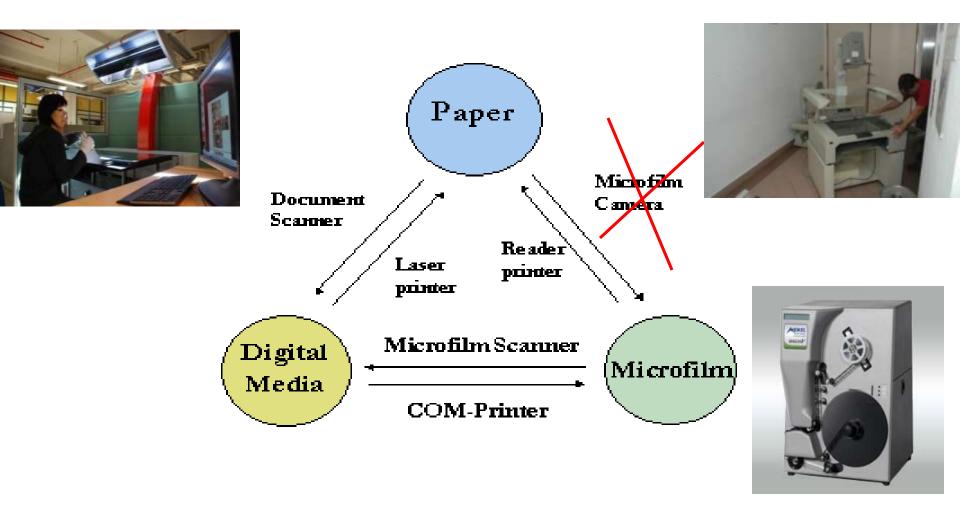
- Film storage at a certain phase within records management life cycle remains the most *costeffective* and *technologically-secured* method of retaining information.
  - Microfilm has century-old proven advantages of legal and archival acceptance.

## WHY TRANSFER TO MICROFILM?

- The medium is human-readable:
  - with magnifying glass
  - not subject to galloping obsolescence that characterises today's digital imaging
  - Information can be easily digitised or redigitised from a film master (to a large extent, meeting archival principle of being reversible)
  - may be faster, more cost-effective to scan film than paper



# Print/Digital to Microfilm to Digital/Print



### Production Process Governed by Established Administrative Procedures and Technical Standards

# Administrative Certification of production done under "regular course of business"

#### Statement of Intent (or Purpose)", containing:

- Name of creating agency and authorization (including disposal)
- List of files scanned
- Date of statement
- Signed by a person with the responsibility and authority

This "statement" can be a simple "To Whom It May Concern" memorandum or a formal proclamation.

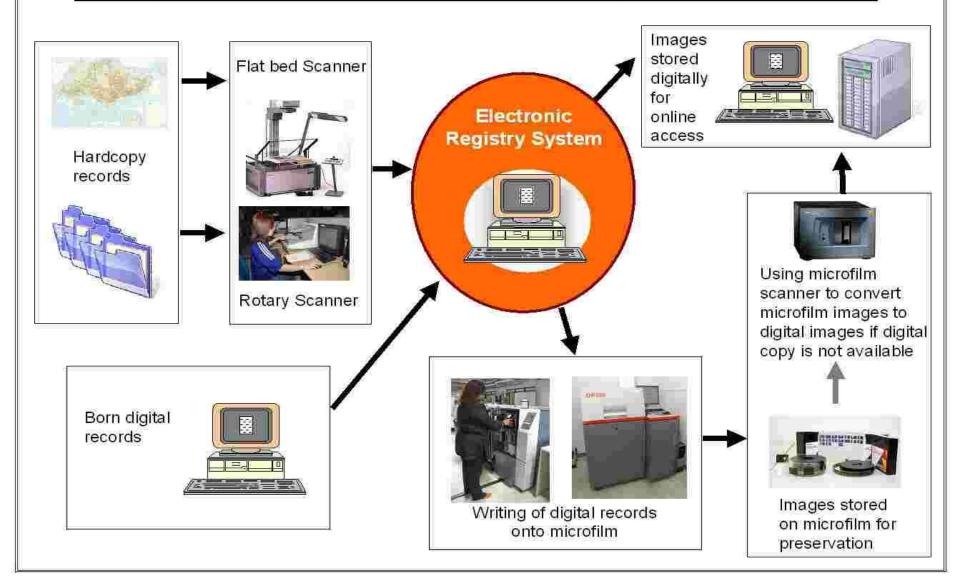
### **"Identification Certificate"**, containing :

- Name of scanning agency/location
- Name of operator
- **•** Model of scanner used & reduction ratio set (if appropriate)
- Date of scanning

These documents should be created and retained as an integral part of the microfilm system. In the case of roll film production, they are usually filmed at the beginning and end of each roll.

 Microfilm copies produced other than in the regular course of business presumptively are less reliable.

#### Integration of microfilm in today's digital environment



# **Concluding Remarks**

"If we begin with certainties, we shall end in doubts; but if we begin with doubts, and we are patient in them, we shall end in certainties."

SIR FRANCIS BACON (1561-1626), ENGLISH PHILOSOPHER, ESSAYIST, STATESMAN Managing electronic records and archives is like taking a calculated risk and not a big time gambling...

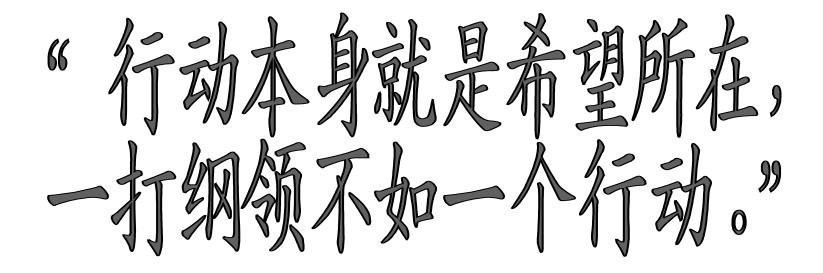
## "设定电子档案保存方针应该是一场 很大的冒险,而非一次性的赌博。"

#### Pitt Kuan Wah



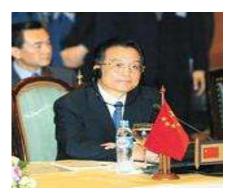
"ON NO ONE QUALITY, ON NO ONE PROCESS, ON NO ONE COUNTRY, ON NO ONE ROUTE AND ON NO ONE FIELD MUST WE BE DEPENDENT. SAFETY AND CERTAINTY IN OIL LIE IN VARIETY, AND VARIETY ALONE."

Winston Churchill, the First Lord of the Admiralty to British Parliament, 1913



中国总理温家宝

亚细安特别抗炎峰会记者招待会 2003年4月29日



# Collaboration and Mutual Benefits

- Increasingly impossible for a single agency to address recordkeeping issues independently.
- Nor is there a software, a system available in the market today that could provide a one-stop solution that solve the "world problem".
- Imperfect solutions are still evolving and will probably not see the daylight before many of us have retired!
- Leveraging on each other's strengths and resources, learning to avoid mistakes will enable one to leapfrog and imperfectly perfecting the unknown.

### The \$1m question: Who should lead?

- The archivist ideally should know their business, operation, how e-system is being apply to benefit their work, therefore in a better position to specify and confirm the requirements (functions, business rules etc).
- The IT professional should not do an archivist job, neither an archivist should do programming work unless they are multi-talented. They should be able to communicate and able to learn and value-added to the archivist operation in adapting a design and system that meet current requirements with growth capacities and change flexibility. Only synergy and partnership with common interest could produce success.

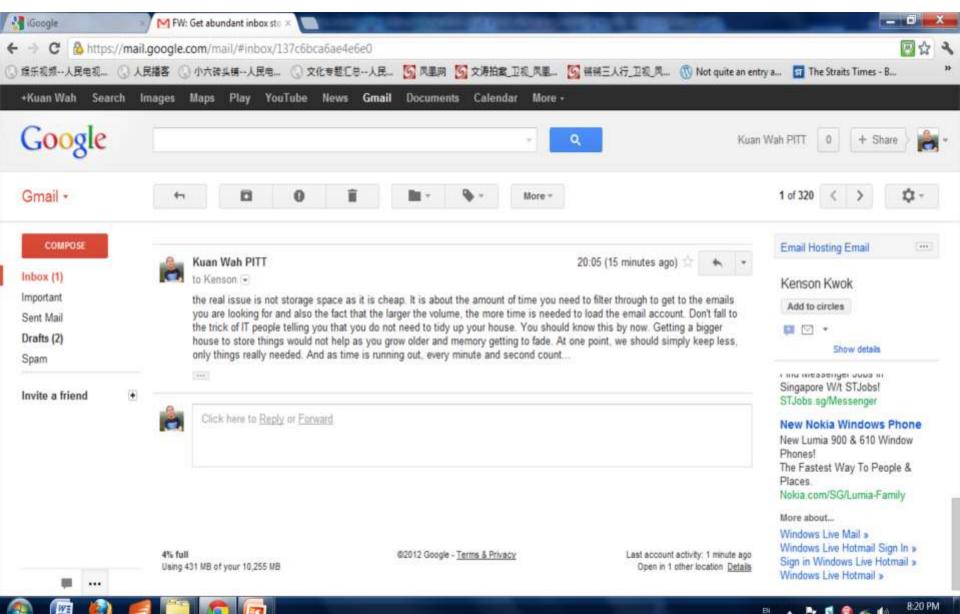
"You are as strong as your weakest link."

### "关于明天的事,我们后天就知道了。"

Can you wait? Are you able to resist the rush? Do you have the courage not to jump into the bandwagon?

The above statement may well apply to the use of technology (whether it works or you are simply wasting monies)...

Finally, for those who wish to know my reply to Kenson....And of course it is far more simplistic than what I have just gone through with all of you over the last two hours...



07-Jun-12

### **Questions?**

