



Needs in HDD Features

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Encrypting Drives

- **Concept has been around...**

 - Keeping the encryption inside the drive is particularly good in providing flexibility in how to authenticate to the data at rest.
(Locality)

- **People are getting personal about data at rest security**

 - Their data is increasingly no longer guarded in data centers
(Ubiquity)

 - There is a lot more of it (Scale)

 - More people have control over the data (Access)

 - The data is growing more precious to more people (Value)

 - This happens in data centers too! (Commerce)

Causes for L-USA-VC

- **Drive Capacities increasing enormously**
- **Drive Cost decreasing enormously**
- **Drives moving into new applications**

Mobile

CE

Surveillance

Backup/Archive

Automotive

Trusted Computing Group

Storage WG Solution

www.trustedcomputinggroup.org

- **Allow Activation of Features (like on-drive encryption services) on Drives as needed.**

Required for Security Assurance

- **Incorporate powerful encryption services with versatile authentication capabilities**

E.G. Key/Passcode Splitting to solve the weak password problem (XOR passcode in your head with passcode in a USB Token).

Other Features

-besides data at rest security- fed by L-USA-VC

- **The data is already lost!**
Organize its locations (e.g., two copies onsite, one offsite)
- **The programs that can handle the data do not survive as data themselves!**
- **Transitioning Data at End of Physical Life is too manual!**
- **Analyse each by Locality-Ubiquity-Scale-Access-Value-Commerce**

A new view of DRM

- **Your 16 Year Old is more stingy about his music/data than your average Studio.**
- **Give him the tools to protect his own data and the Studios will be protected.**
- **Does not preclude studio protection (CD failure versus DVD success in protecting property)**