

"Do You Really Know Your Data?"

Dr. Gary Servos

Ovation Data Services, Inc.

10650 Haddington Drive

Houston TX 77043-3229

Phone: +1-713-464-1300, FAX: +1-713-464-1615

e-mail: garyservos@ovationdata.com

<http://www.ovationdata.com>

www.ovationdata.com

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**“WHAT CAN &
WHAT WILL
HAPPEN TO
YOUR DATA”**



**“A NON-TECHNICAL
PRESENTATION
DESIGNED TO
STIMULATE YOUR
THINKING RELATIVE
TO INFORMATION
ASSETS”**



**“BASED ON
ACTUAL CASES
ENCOUNTERED ON
VALUABLE
INFORMATION
ASSETS”**



WHY?



YOU ARE
GOING TO
LOSE
SOME OF YOUR
DATA ASSET!!!



**THE INFORMATION
MUST BE
AVAILABLE
TO THE USER
AT THE TOUCH
OF A BUTTON**



IN A FORMAT THAT IS
ACCEPTABLE TO
WHATEVER
APPLICATION
SOFTWARE THE USER
NEEDS



“THE NUMBERS”

TERMINOLOGY

COMPONENTS

BYTES

1 Byte	1 B =	8 Bits	=	1
1 KiloByte	1 KB =	1024	=	1024
1 MegaByte	1 MB =	1024x1024	=	1,048,576
1 GigaByte	1 GB =	1024x1024x1024	=	1,073,741,824
1 TeraByte	1 TB =	1024x1024x1024x1024	=	1,099,511,627,776
1 PetaByte	1 PB =	1024x1024x1024x1024x1024	=	BIG
1 ExaByte	1 EB =	1024x1024x1024x1024x1024x1024	=	BIGGER



DATA TAPES



THE CASE
OF
1/2' ROUND
9-TRACK
TAPE



“STICTION”

THE OXIDE LAYER

THE {BINDER/GLUE} LAYER

THE MYLAR LAYER

1. TEMP., HUMIDITY, AGE

2. TEMP., HUMIDITY

3. TEMPERATURE, AGE

4. TEMPERATURE

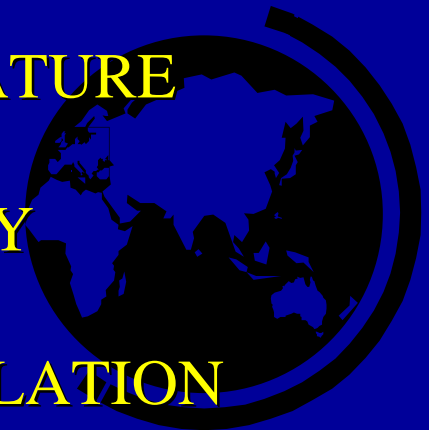
5. HUMIDITY, AGE

6. HUMIDITY

7. AGE

8. MFG. CHEMICAL FORMULATION

{A BAD BATCH}



9 - TRACK “STICTION”

◆ PROBLEM

- ◆ TAPE STICKS TO DRIVE HEADS
 - ◆ TAPE POPS ON READ START
 - ◆ TAPE WILL NOT REWIND
 - ◆ BAD READS

◆ SOLUTION

- ◆ MMR---TREATMENT
- ◆ CLEAN ON TAPECLEANER WO/BLADES



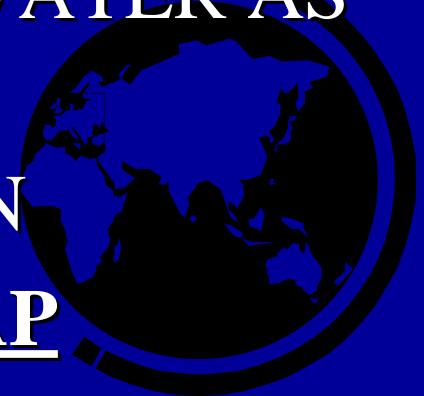
WET TAPES

◆ PROBLEM

- ◆ FLOOD - DROPPED IN GULF (etc.) - ANY WATER DAMAGE

◆ SOLUTION:

- ◆ CLEAN TAPES IMMEDIATELY IN WATER AS FRESH AS IS AVAILABLE
 - ◆ DRY AS BEST AS ONE CAN
 - ◆ TREAT IN MMR UNIT - ASAP
- ◆ COPY DATA TO NEW MEDIA FOR ARCHIVE



OIL SOAKED TAPES

◆ PROBLEM

- ◆ TAPE COVERED WITH MOTOR OIL

◆ SOLUTION:

- ◆ CLEAN TAPES IMMEDIATELY IN SOAPY WATER - SEVERAL TIMES MAY BE REQUIRED
 - ◆ DRY AS BEST AS ONE CAN
 - ◆ TREAT IN MMR UNIT
- ◆ COPY DATA TO NEW MEDIA FOR ARCHIVE



FIRE DAMAGED TAPES

◆ PROBLEM

- ◆ TAPE SPOOL MELTED AND WARPED

◆ SOLUTION

- ◆ GIVE YOUR DATA TO AN EXPERT
- ◆ BREAK PLASTIC FROM AROUND TAPE SPOOL
- ◆ REWIND TAPE ONTO NEW SPOOL - BY HAND
 - ◆ CLEAN TAPE & TREAT IN MMR UNIT
- ◆ COPY DATA TO NEW MEDIA FOR ARCHIVE



SEVERED TAPES

◆ PROBLEM

- ◆ TAPE CUT OR SNAPPED IN TWO

◆ SOLUTION

- ◆ GIVE YOUR DATA TO AN EXPERT
- ◆ SPLICE TAPE WITH CORRECT MATERIAL AND ALIGNMENTS
- ◆ COPY DATA TO NEW MEDIA FOR ARCHIVE
 - ◆ SOME INFORMATION MAY BE LOST
 - ◆ AN EXPERT WILL MINIMIZE THE LOSS



STRETCHED TAPES

◆ PROBLEM

- ◆ TAPE DRIVE MALFUNCTION

◆ SOLUTION

- ◆ REMOVE THE STRETCHED PORTION OF TAPE
- ◆ SPLICE TAPE WITH CORRECT MATERIAL AND ALIGNMENTS
- ◆ COPY DATA TO NEW MEDIA FOR ARCHIVE
 - ◆ INFORMATION WILL BE LOST
 - ◆ AN EXPERT WILL MINIMIZE THE LOSS

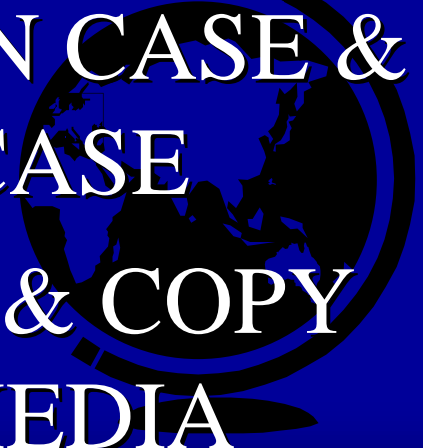


“CRUSHED TAPE CASE”

◆ PROBLEM:

- ◆ TAPE CASE CRUSHED BY FORKLIFT

◆ SOLUTION


- ◆ REMOVE TAPE FROM BROKEN CASE & PLACE IN TEMPORARY CASE
 - ◆ READ TAPE FOR PROBLEMS & COPY INFORMATION TO NEW MEDIA
- 

“CRACKED TAPE CASE”

◆ PROBLEM:

- ◆ TAPE CASE DROPPED - DAMAGE

◆ SOLUTION

- ◆ GIVE YOUR DATA TO AN EXPERT
 - ◆ REMOVE TAPE FROM BROKEN CASE & PLACE IN TEMPORARY CASE
 - ◆ READ TAPE FOR PROBLEMS & COPY INFORMATION TO NEW MEDIA
- 

WRITTEN OVER DATA

◆ PROBLEM

◆ NIGHT OPERATOR RE-INITIALIZED A VOLUME HEADER - SYSTEM WOULD NOT ACCEPT THE TAPE FOR A SCHEDULED RUN

◆ SOLUTION

◆ READ TAPE PAST THE HEADERS - READ DATA BACKWARDS TO BEGINNING OF GOOD DATA



WRITTEN OVER DATA

◆ SOLUTION

- ◆ RE-CREATED CORRECT HEADERS ON A NEW MEDIA
- ◆ THEN COPY DATA TO THE NEW MEDIA FOLLOWING THE NEW HEADERS
- ◆ PS
- ◆ OPERATOR WHO RE-INITIALIZED THE TAPE LEFT HIS NAME, DATE AND THE TIME IN THE RE-INITIALIZED HEADERS



SOME NEWER MEDIA

◆ PROBLEM

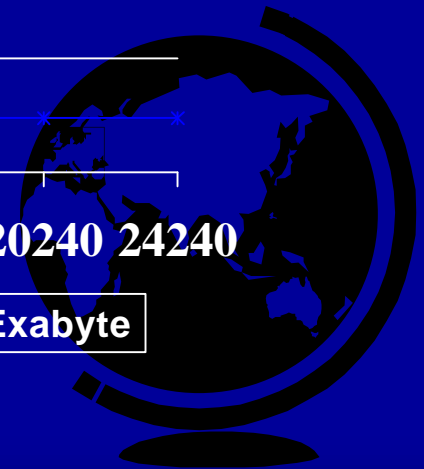
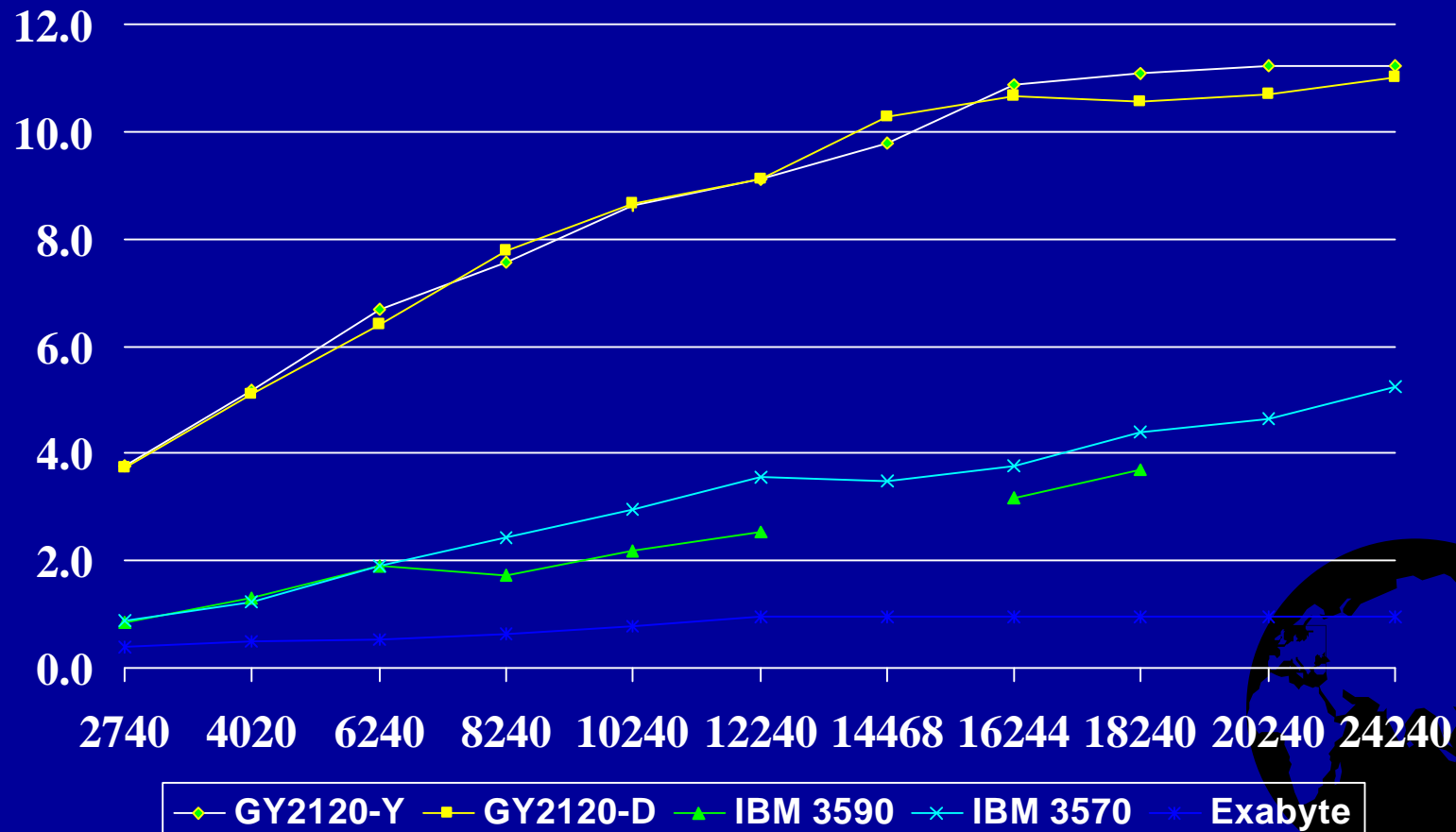
◆ DATA TRANSFERS SLOW

◆ SOLUTION

- ◆ KNOW YOUR DATA - FILE SIZE - RECORD LENGTH - BLOCK SIZE
- ◆ KNOW THE DRIVE SPECS. - OPTIMUM BLOCK SIZE - MOST NEWER MEDIA HAVE VARIABLE TRANSFER RATES DEPENDING



CB Mode Data Transfer (SEG-Y and SEG-D format)



SOME NEWER MEDIA

✦ SOLUTION

ON THE RECORD LENGTH OF THE DATA

- ✦ EOFs REPRESENT BYTES OF TAPE SPACE AND TAKE TIME TO WRITE - SOME TAKE A LONG TIME TO WRITE AND USE SIGNIFICANT SPACE ON THE TAPE
- ✦ KNOW YOUR DATA AND UNDERSTAND THE STORAGE MEDIA YOU USE



SOME NEWER MEDIA

◆ EXAMPLE

◆ 32 HOURS TO TRANSFER 2 GB OF DATA

◆ REASON

◆ ALL RECORDS WERE 512 BYTE RECORDS

◆ &

◆ ? DRIVE THAT WROTE THE TAPE MAY
HAVE BEEN IN NEED OF
RECONDITIONING



IMAGING



WHAT ARE
GOING TO
DO WITH
YOUR FILE?



LET'S TAKE AN EXAMPLE

“A REPORT”

“A WELL LOG”

“A SEISMIC SECTION”

“A MAP”



WHAT WILL THE USER WANT TO DO WITH THE FILE?

VIEW

PRINT

OCR

FAX

EMAIL

APPLICATIONS



VIEW

QUICKLY SCAN THE PAGES
ON THE SCREEN AND REVIEW

PRINT ANY 1 PAGE OR PRINT
THE ENTIRE REPORT

FAX OR EMAIL THE ABOVE



NOT A LARGE PROBLEM
IF THE DOCUMENT IS
READABLE, THEN THE
IMAGES ONLY NEED TO
BE SCANNED WITH A
QUALITY THAT ALLOWS
THE DOCUMENT TO BE
READ



IF YOU WANT TO OCR-
THEN IT A DIFFERENT MATTER

AT WHAT DPI WAS THE
DOCUMENT SCANNED

150 DPI
GOOD LUCK



IF YOU EVER THINK THAT
YOU MAY WANT TO OCR
AT ANY FUTURE DATE-

THEN YOU MUST CONSIDER
THE DPI AT WHICH YOU
ORIGINALLY SCAN
200???-300???



AT 150DPI---POOR OCR

AT 200DPI---BETTER

AT300DPI---BEST

SOUNDS EASY ENOUGH



WHY IS THIS EVEN
DISCUSSED?

FILE SIZE

HOW MANY BYTES?



COSTS

IT TAKES LONGER TO SCAN
AT
HIGHER DPI

TIME IS \$\$\$\$\$\$



STORAGE SPACE
MEGABYTES
TAKE UP SPACE
SPACE COSTS \$\$\$
LARGER FILE TAKE
MORE SPACE
LARGER FILES TAKE
MORE TIME



POINT

KNOW WHAT YOU WANT TO
DO WITH YOUR DATA

DO IT RIGHT THE 1ST TIME
IT WILL SAVE \$\$\$ IN THE
FUTURE



WELL LOGS

SIMILAR TO DOCUMENTS

HOW ARE YOU GOING
TO USE THE IMAGE FILE?



PRINT/PLOT?

OK

**YOU GET WHAT YOU
SCANNED**




EXPORT TO AUTO VECTORIZATION SOFTWARE

NOW YOU MUST
BE CONCERNED WITH THE
IMAGE QUALITY TO
ACHIEVE THE DIGITAL
QUALITY



? DO I SCAN AT A HIGHER DPI
? DO I IMAGE PROCESS
DESPECKLE, CONTRASTS,
INTENSITY

IF YOU DON'T-WILL THE
IMAGE QUALITY ALLOW
THE SOFTWARE TO
DIGITIZE ACCURATELY?



**IF NOT- THEN WHAT VALUE
IS THE IMAGE FILE**



THE IMAGE SIZE IS A
MAJOR FACTOR-
WELL LOGS CAN TAKE UP
A LOT OF MBs DEPENDING
ON THE DPI OF THE SCAN

THINK THROUGH YOUR
FUTURE APPLICATIONS



THE SAME WILL
APPLY TO ALL
MAPS, X-SECTIONS,
CHARTS, GRAPHS
OR WHATEVER



THE IMAGE IS NOW YOUR
ASSET

IF YOU IMAGE CORRECTLY
THEN YOU CAN USE IT
IN ANY FUTURE
APPLICATION




BACKUP TAPES

◆ PROBLEM

- ◆ CANNOT READ DATA
- ◆ NEW COMPUTER SYSTEM

◆ SOLUTION

- ◆ FIND COMPUTER IDENTICAL TO SYSTEM THAT WROTE TAPES
 - ◆ WRITE ALL KEY INFORMATION IN DATA FORMATS - NOT SYSTEM BACKUP
- 

**KEEP YOUR FILES
AS A
DATA FILE!!!**



Archive



SUMMARY

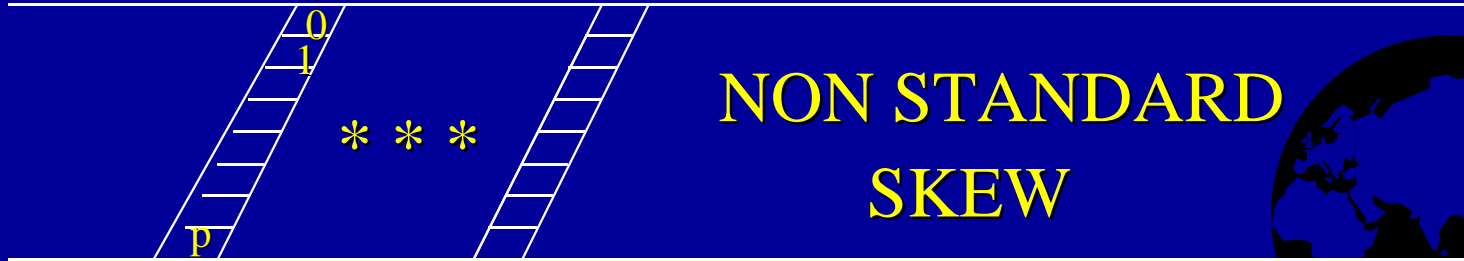
- ✦ YOUR INFORMATION IS A VALUABLE ASSET
- ✦ UNDERSTAND YOUR INFORMATION & STORAGE MEDIAS
- ✦ PROTECT YOUR ASSETS



“SKEW”



TAPE FLAT VIEW



- WE ACTUALLY HAVE A
A FINITE SPARE PARTS
PROBLEM BEFORE WE HAVE
A PROBLEM WITH THE
PHYSICAL MEDIA
- HOW DO WE SOLVE THIS?



- TECHNOLOGY IS MOVING FORWARD AT A HIGH RATE OF SPEED
- WE HAVE MANY NEW TYPES OF MEDIA
- NO GOOD WAY TO KEEP UP



• 8MM EXABYTE EVOLUTION

- 8200
- 8500
- 8200/8500 C
- 8205
- 8505
- 8505 XL
- 8700
- ELIANT 820



OVATION DATA SERVICES, INC.
10650 HADDINGTON DRIVE
HOUSTON, TEXAS 77043
PHONE: 713-464-1300
FAX: 713-464-1615
E-mail: info@ovationdata.com
Web-<http://www.ovationdata.com>

OVATION DATA SERVICES, INC. UK
COULSDON, SURREY
PHONE: +44 181 763 8000
FAX: +44 181 763 8333
Email: ovatdatuk@aol.com

KANSAS OVATION DATA SERVICES
HUTCHINSON, KANSAS 65704
PHONE: 316-662-6769
FAX: 316-662-8871

