

SONY

“News Base System “ (Corso Base)

Marco Casagrande

System Engineer

Argomenti del Corso

1/3

- Alcuni cenni sul mondo Video
 - Video Analogico e Digitale
 - Cenni sulla compressione Video
 - La registrazione Lineare – Non lineare
 - Il Videoserver e il sistema Raid
 - Networking
 - L'editing Video

Argomenti del Corso

2/3

- Il sistema per le NEWS
 - Overview del sistema
 - Schema a blocchi
 - Video in Alta e Bassa risoluzione
 - L' EDL

Argomenti del Corso 3/3

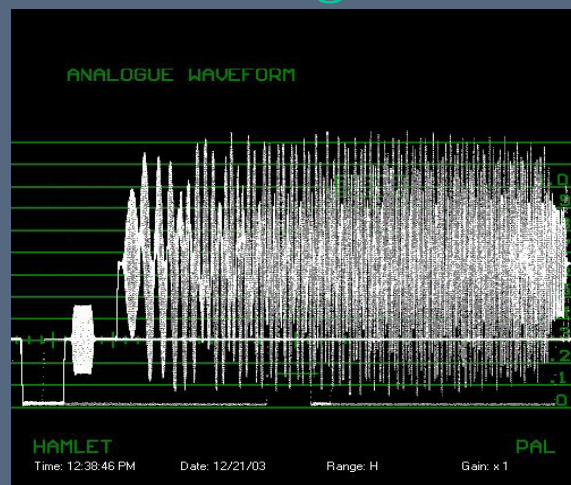
- Operatività del NEWS BASE
 - Postazione di Filing
 - Daily Server
 - On Air Server
 - Postazione di Material Management
 - DNE 2000
 - Clip Edit
 - Play Out
 - Interazione con News Room

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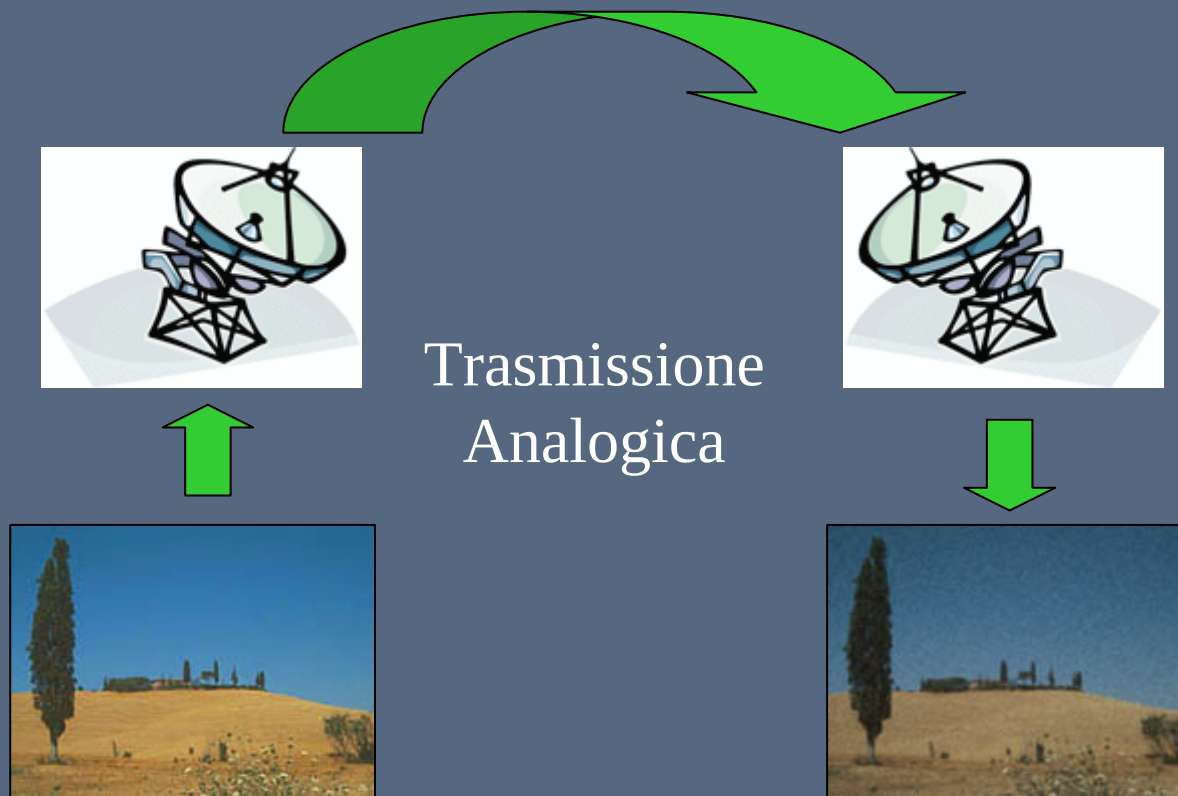
Il Video Analogico



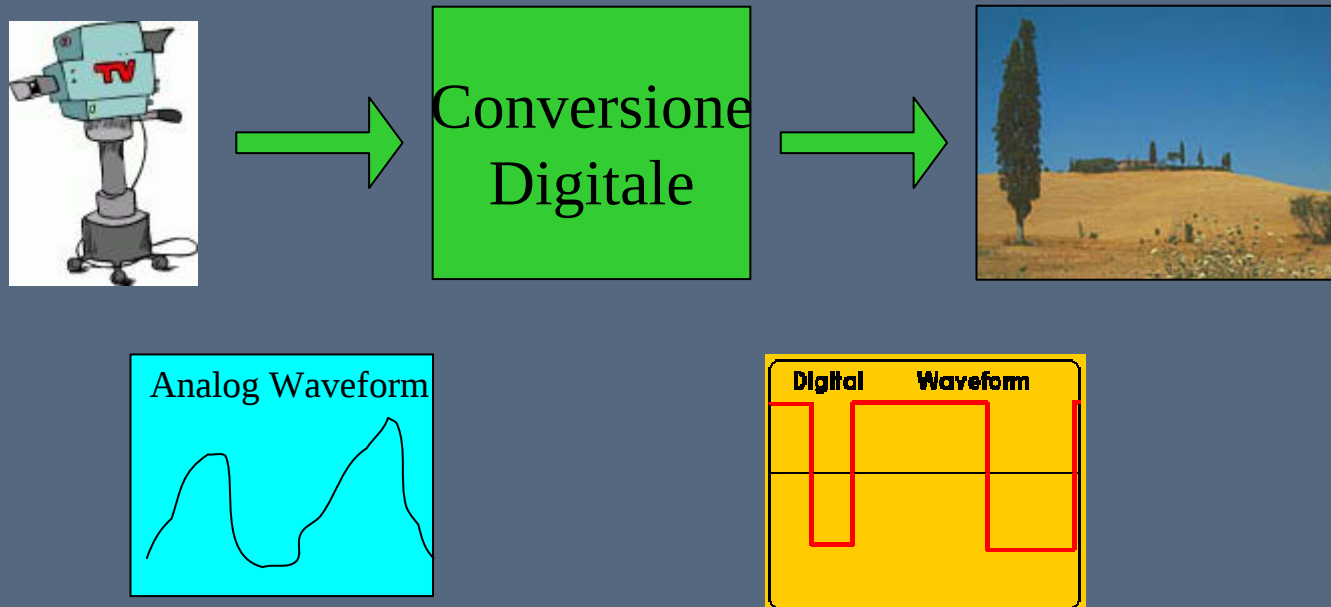
Il rumore elettrico degrada l'immagine



Il Video Analogico



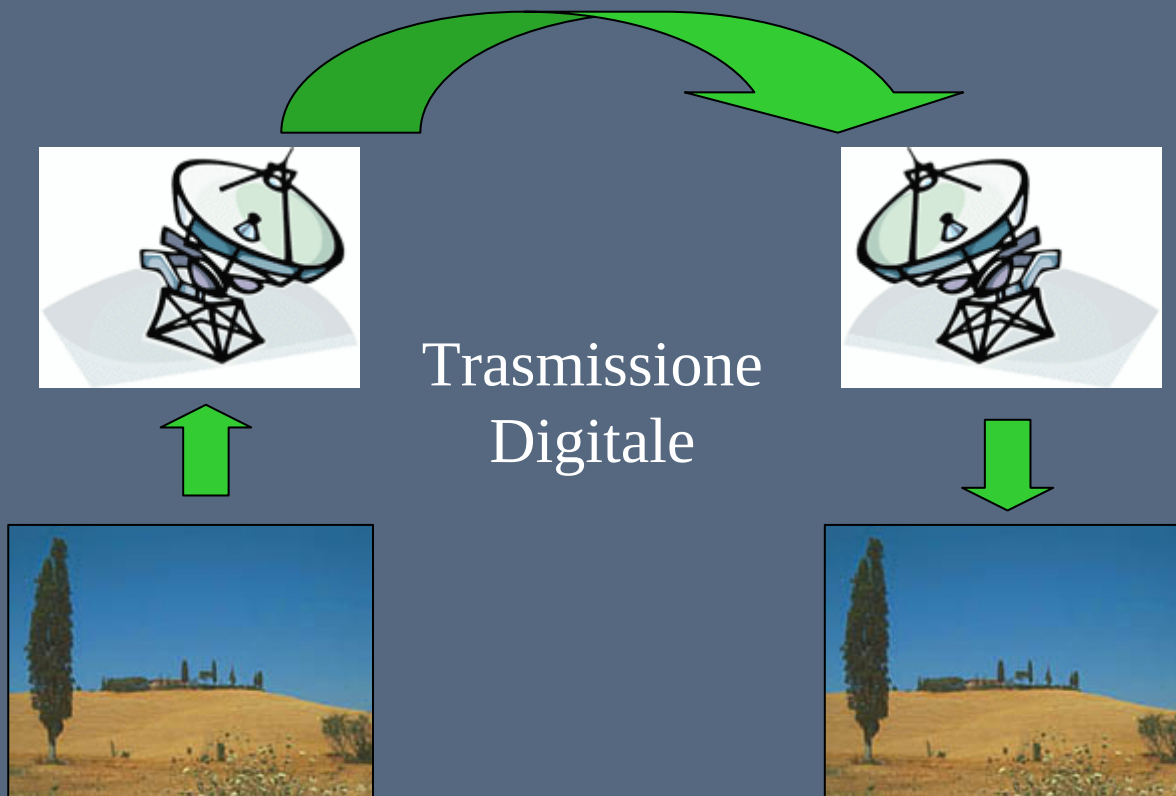
Il Video Digitale



Nel segnale digitale Il rumore non modifica la qualità dell'immagine

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Il Video Digitale



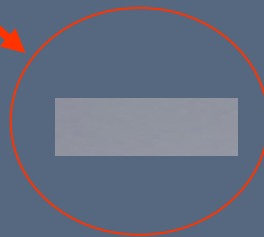
SONY

Il Video Digitale ? (La Compressione)



Campione A

1 0 1 0 1 0 1 0 1 0



Campione B

0 1 1 1 1 1 1 1 1 1

Il Video Digitale ? (La Compressione)

Campione A

0 1 0 1 0 1 0 1 0 1

10 Byte di i

Campione B

0 1 1 1 1 1 1 1 1 1

Il Valore "1" si ripete "9" volte



Campione A

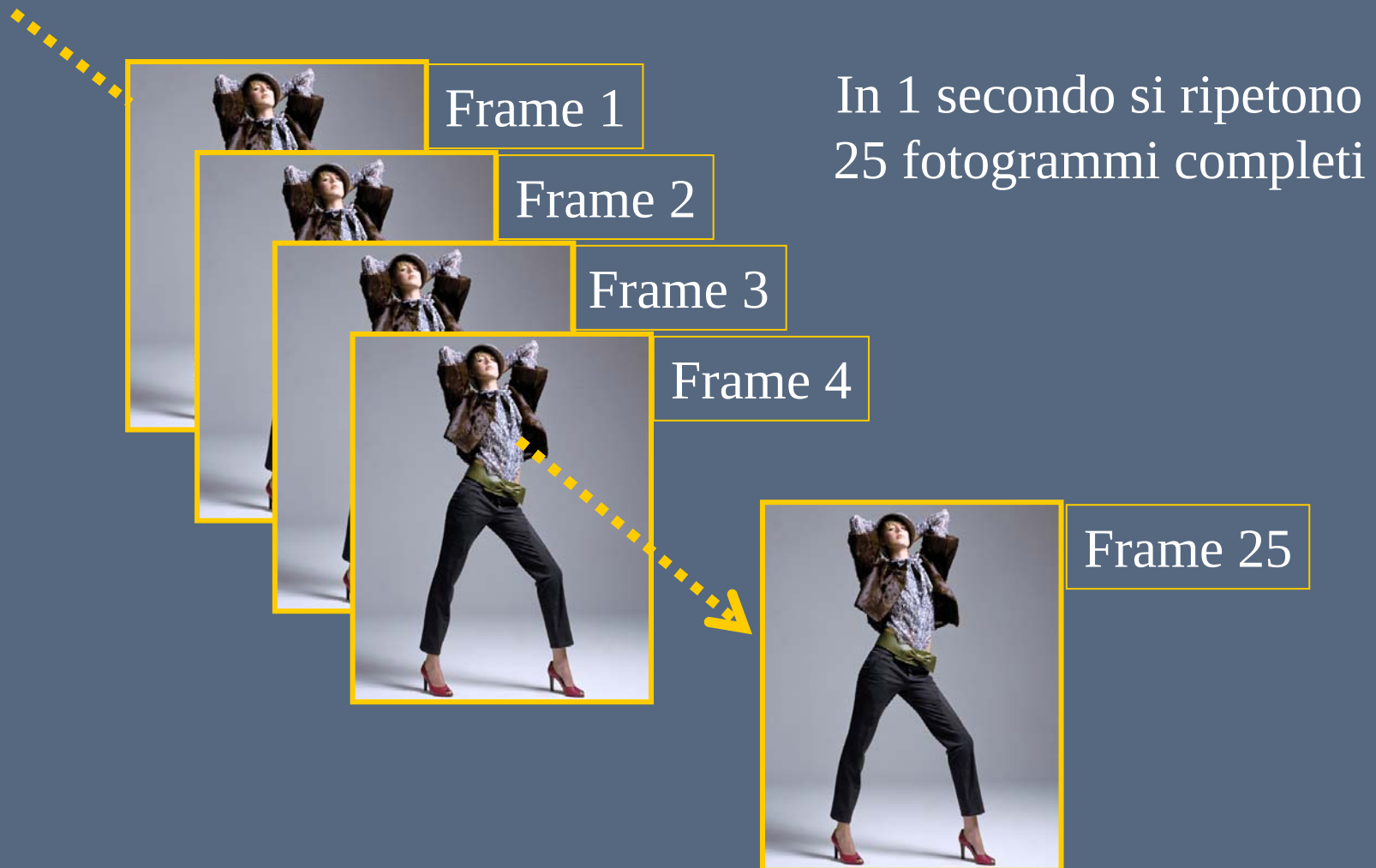
0 1 0 1 0 1 0 1 0 1

Campione B

0 '1 9'

Si ottiene così una riduzione di dati da memorizzare .

Il Video Digitale ? (La Compressione)



Il Video Digitale ? (La Compressione)

Vengono anche confrontati i frame
Tra loro raggruppandoli

Gruppo1



Frame 1



Frame 2



Frame 3



Frame 4

Gruppo2



Frame 5



Frame 6



Frame 7



Frame 8

Il Video Digitale ? (La Compressione)

Più i frame sono simili tra loro più l'immagine
Sarà comprimibile

Frame1 = Frame2 = Frame3 = Frame4

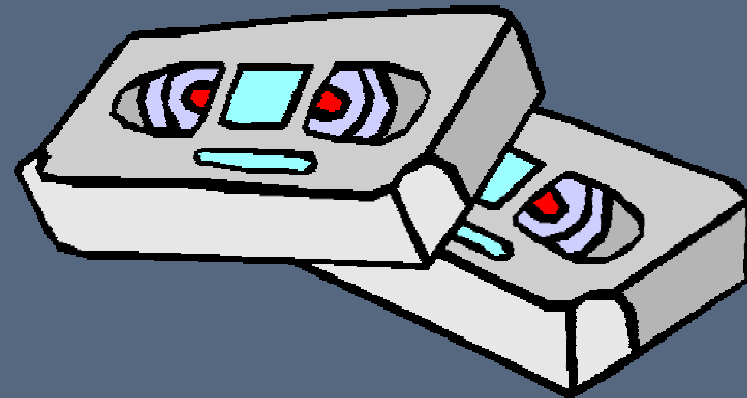
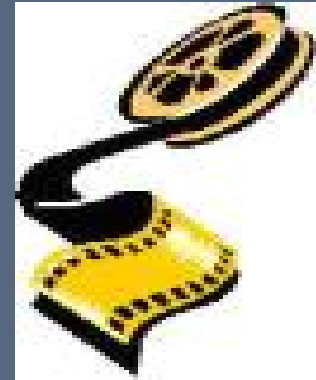
L'informazione trasmessa dopo la compressione sarà:
“Visualizza il Frame1 x 4 volte”



x 4 volte

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Perché “Non Lineare” ? (Registrazione Lineare)

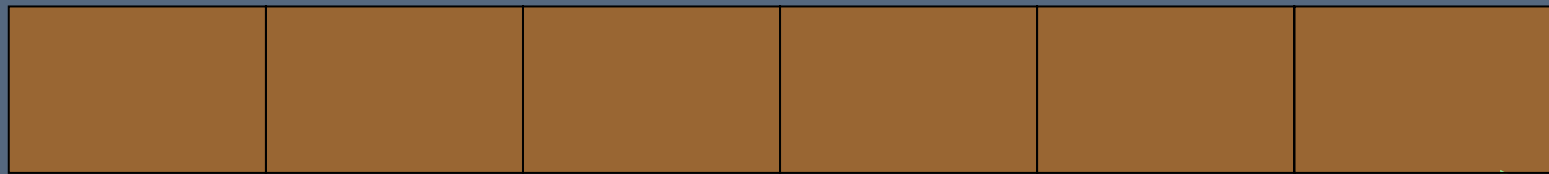


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Perché “Non Lineare” ? (Registrazione Lineare)



Frame1



Nastro
Magnetico

SONY

Perché “Non Lineare” ? (Registrazione Lineare)



Frame2



Frame1



Nastro
Magnetico

SONY

Perché “Non Lineare” ? (Registrazione Lineare)



Frame3



Frame2

Frame1



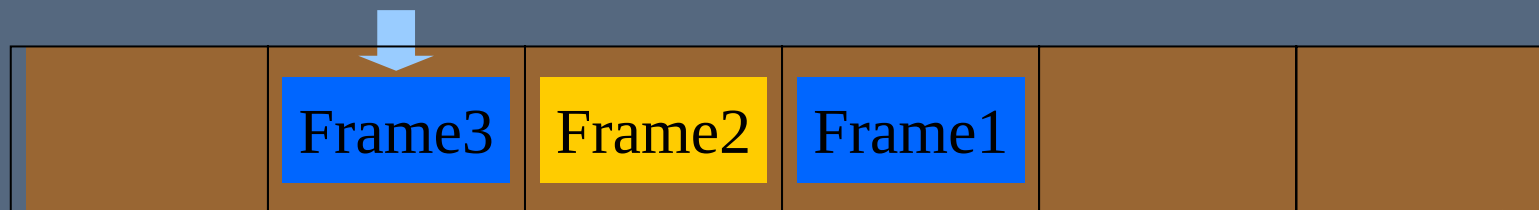
Nastro
Magnetico

SONY

Perché “Non Lineare” ? (Registrazione Lineare)



Frame4



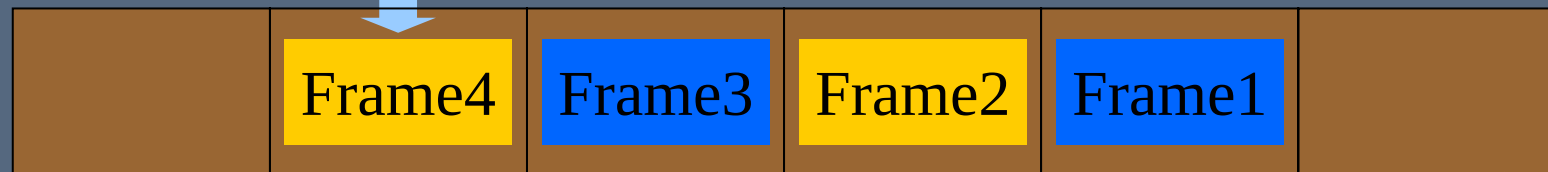
Nastro
Magnetico

SONY

Perché “Non Lineare” ? (Registrazione Lineare)



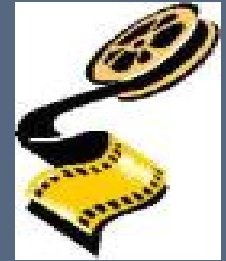
Frame5



Nastro
Magnetico

SONY

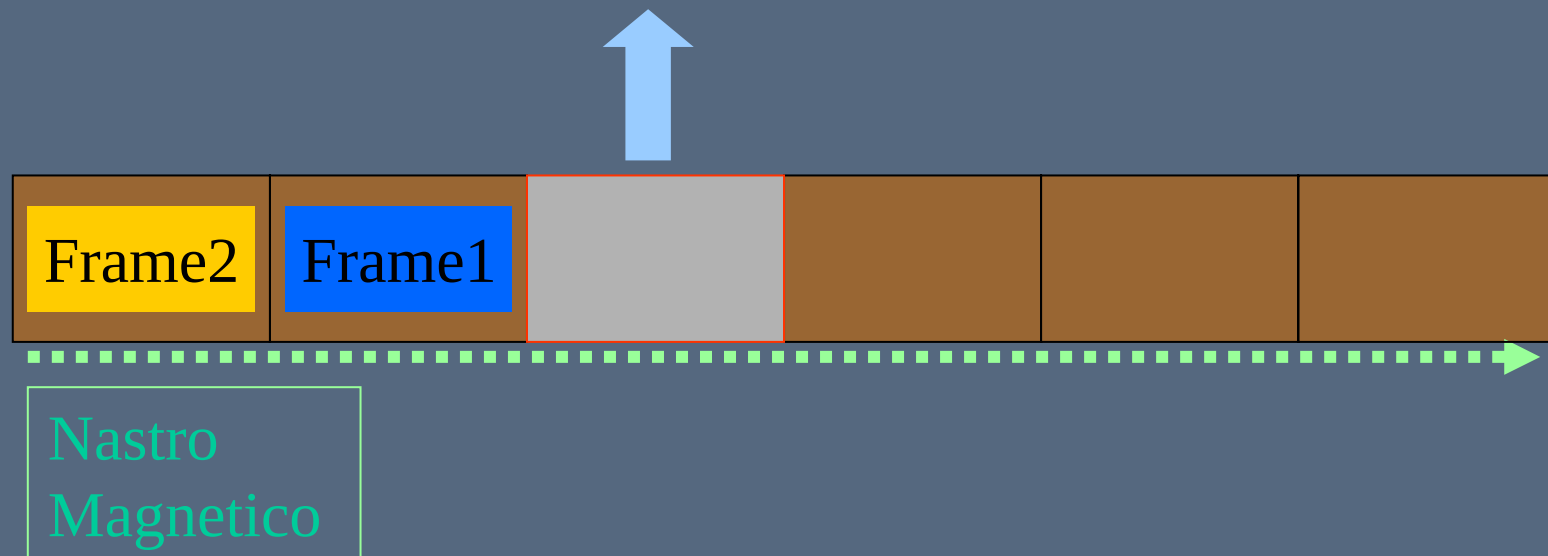
Perché “Non Lineare” ? (Registrazione Lineare)



Nastro
Magnetico

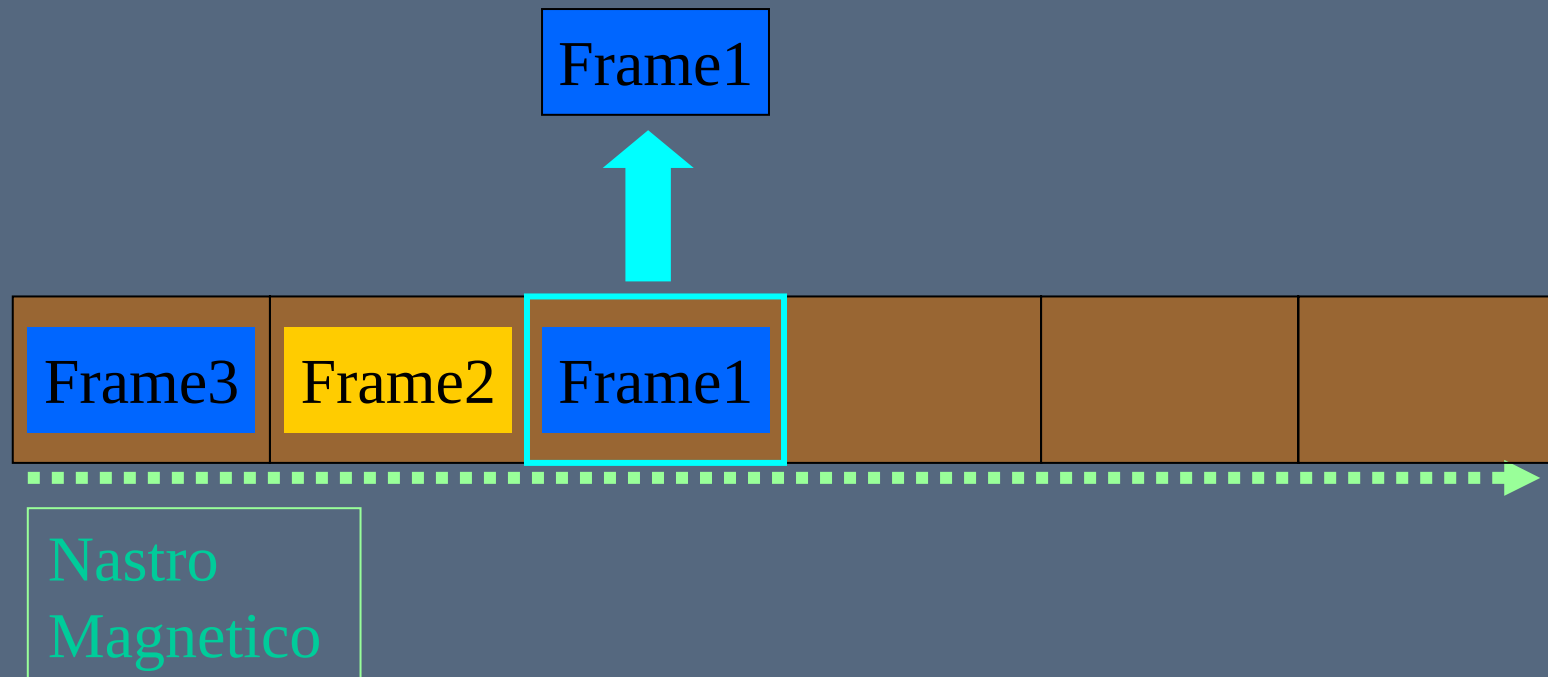
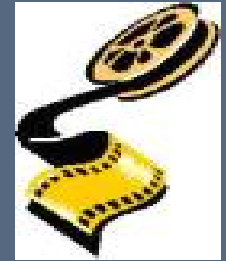
SONY

Perché “Non Lineare” ? (Lettura Lineare)

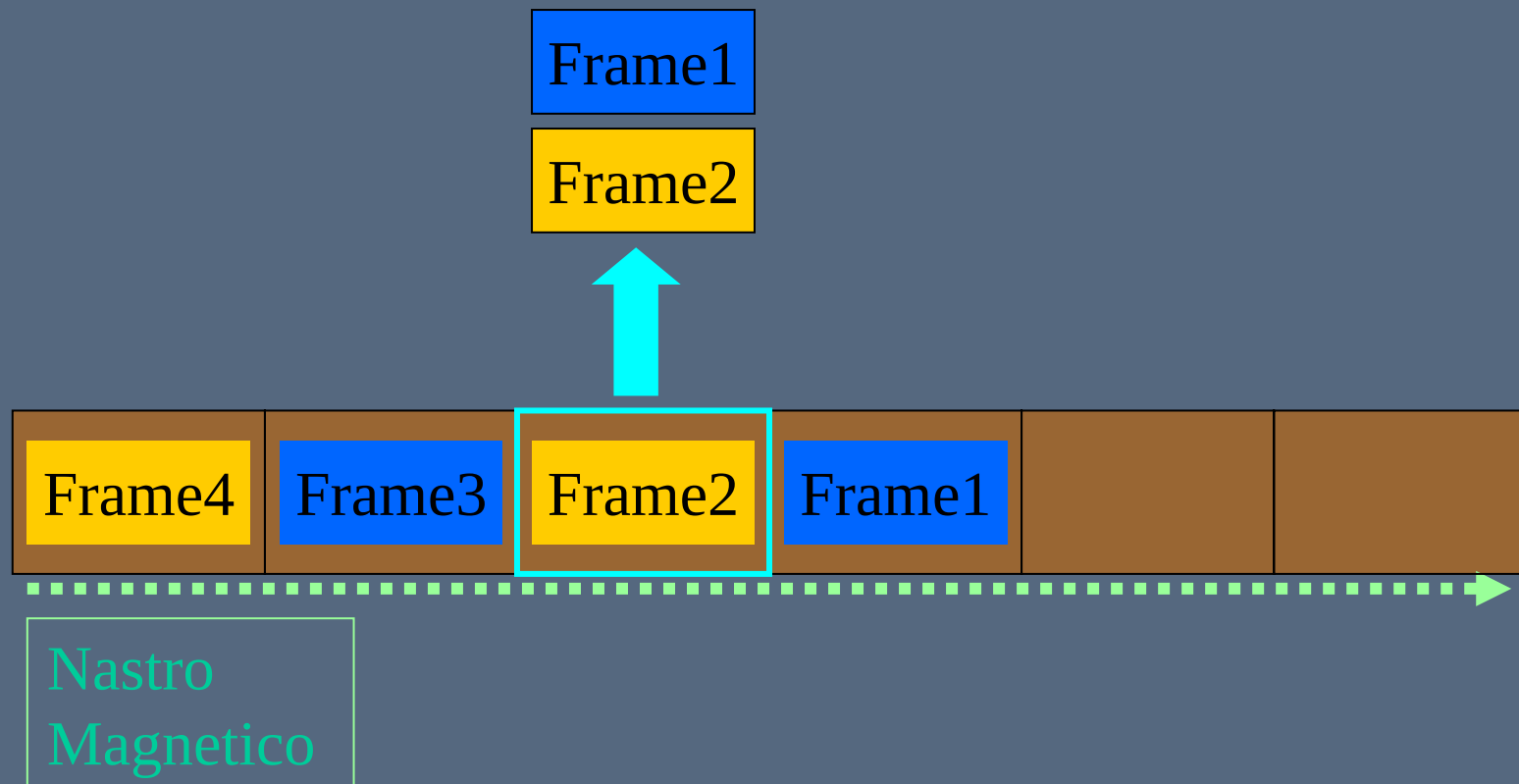


SONY

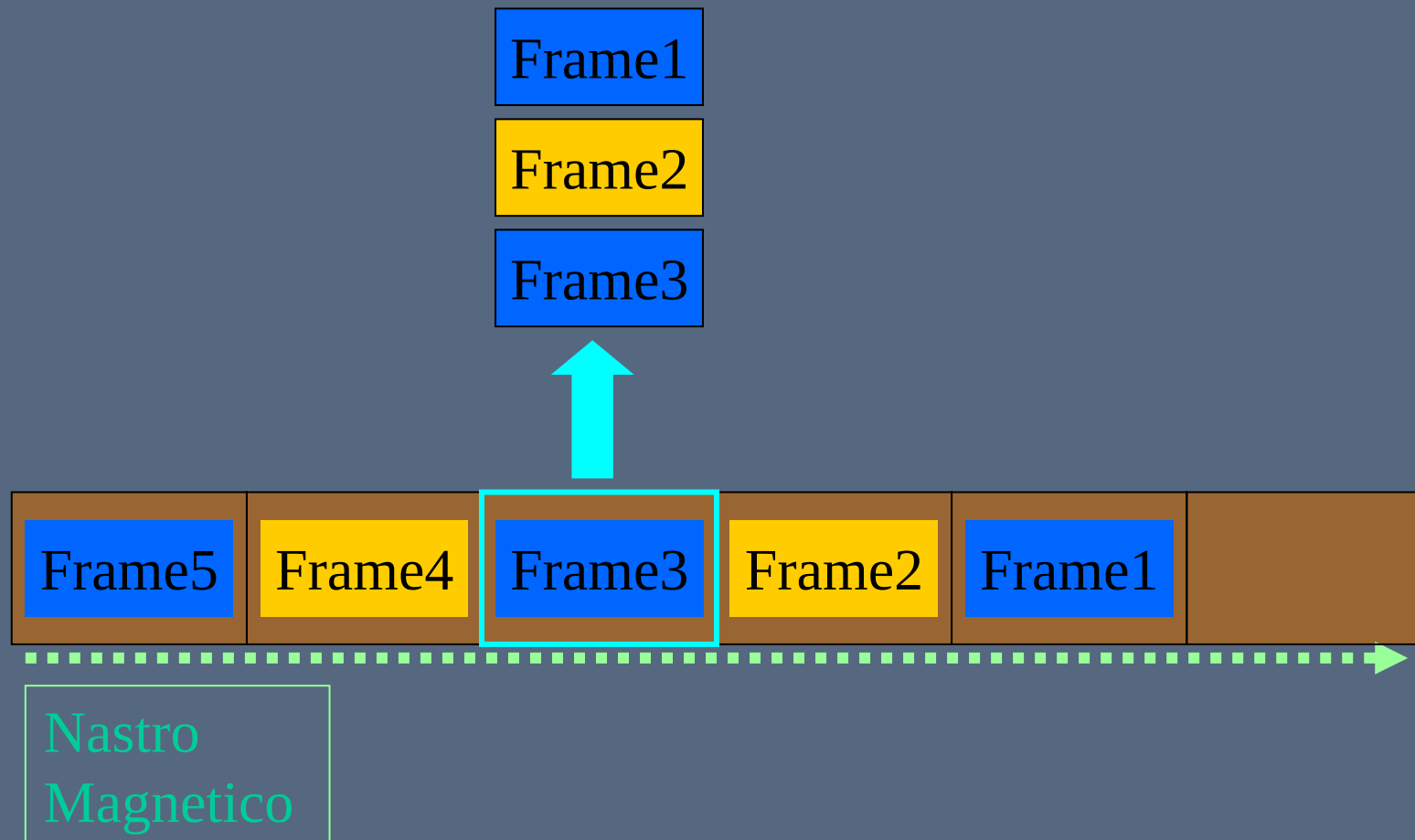
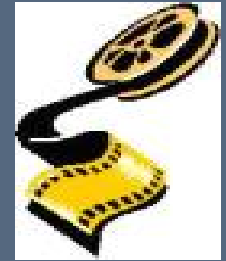
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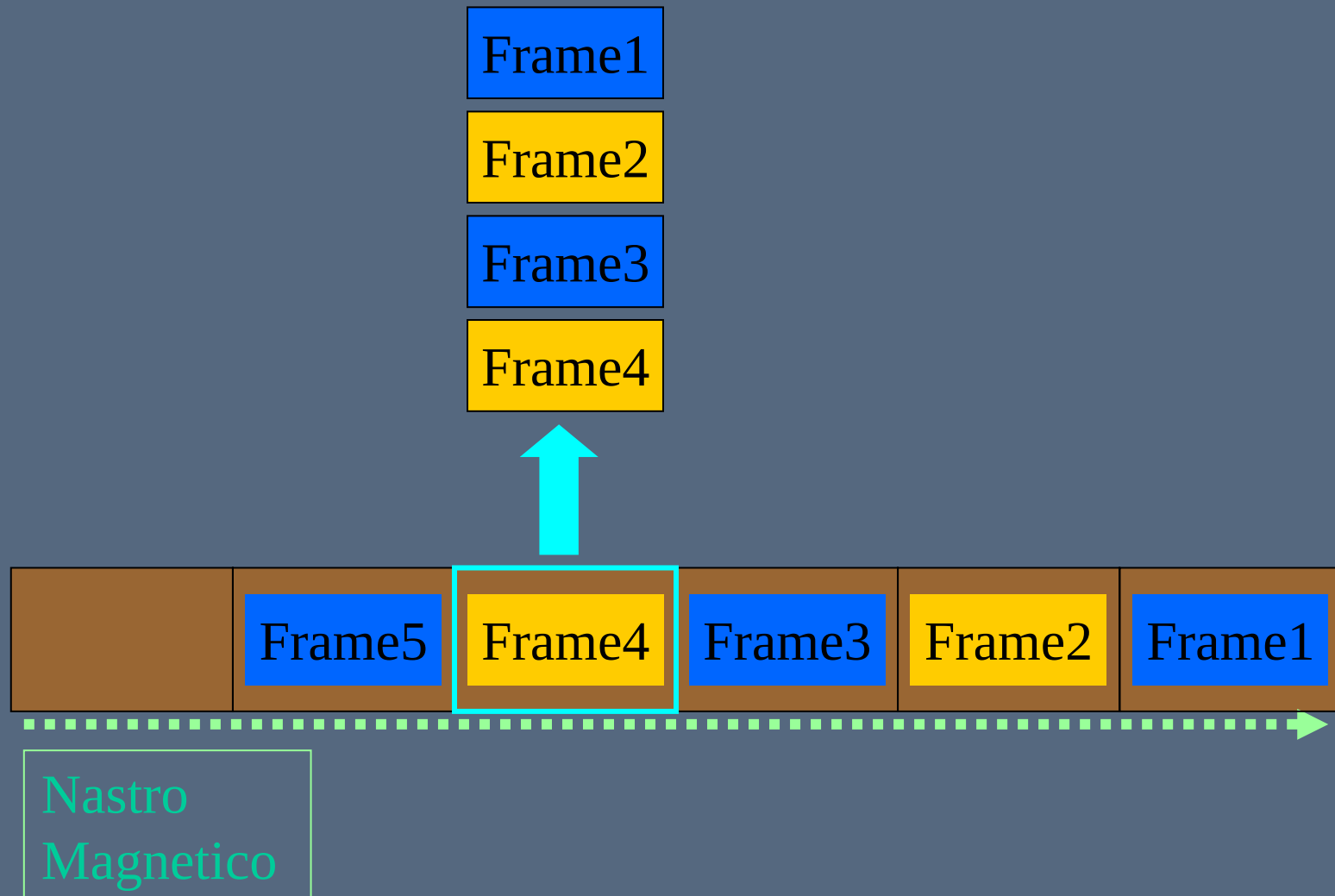
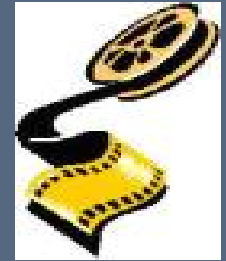
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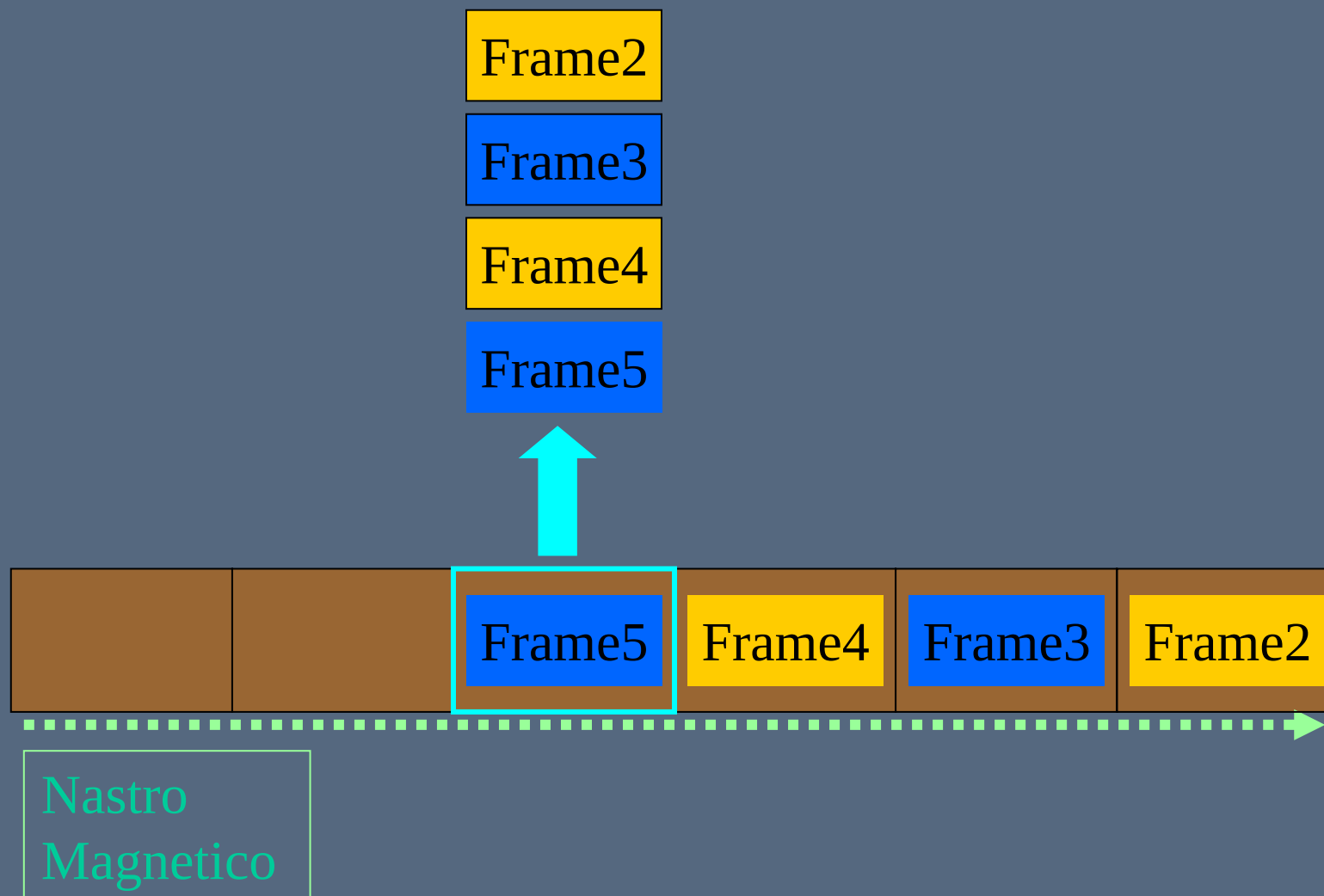
Perché "Non Lineare" ? (Lettura Lineare)



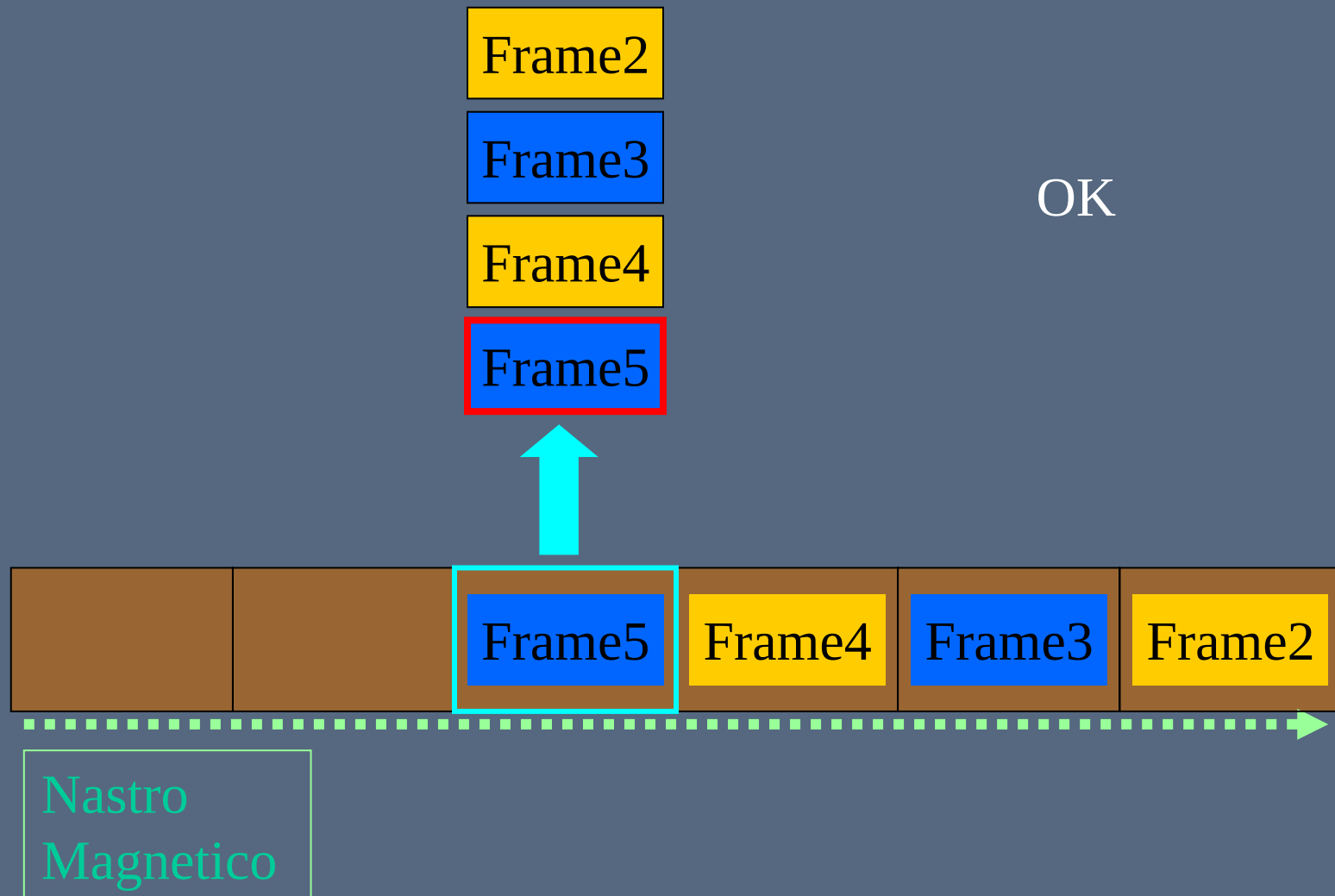
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Perché “Non Lineare” ? (Lettura Lineare)



Perché "Non Lineare" ? (Lettura Lineare)



SONY

Perché “Non Lineare” ? (Registrazione **Non Lineare**)



1 0 1 0 1 0

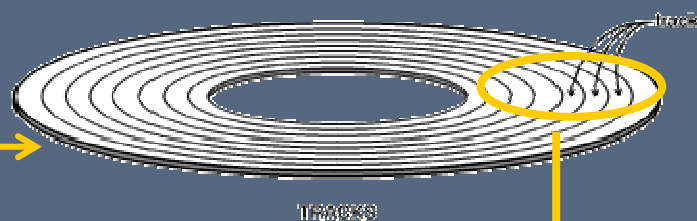
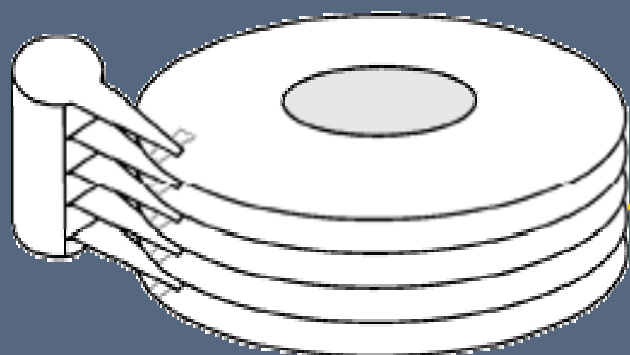
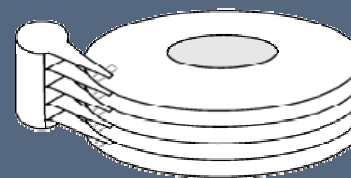


Hard Disk



SONY

Perché “Non Lineare” ? (Registrazione **Non Lineare**)

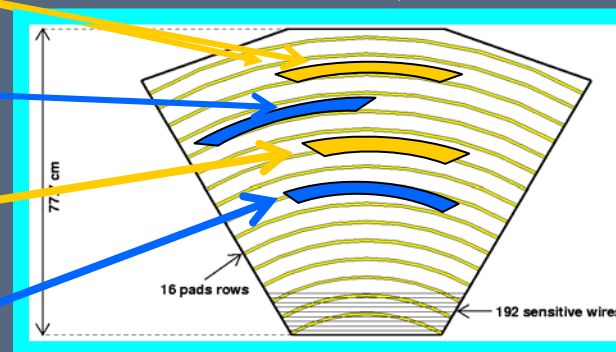


Frame4

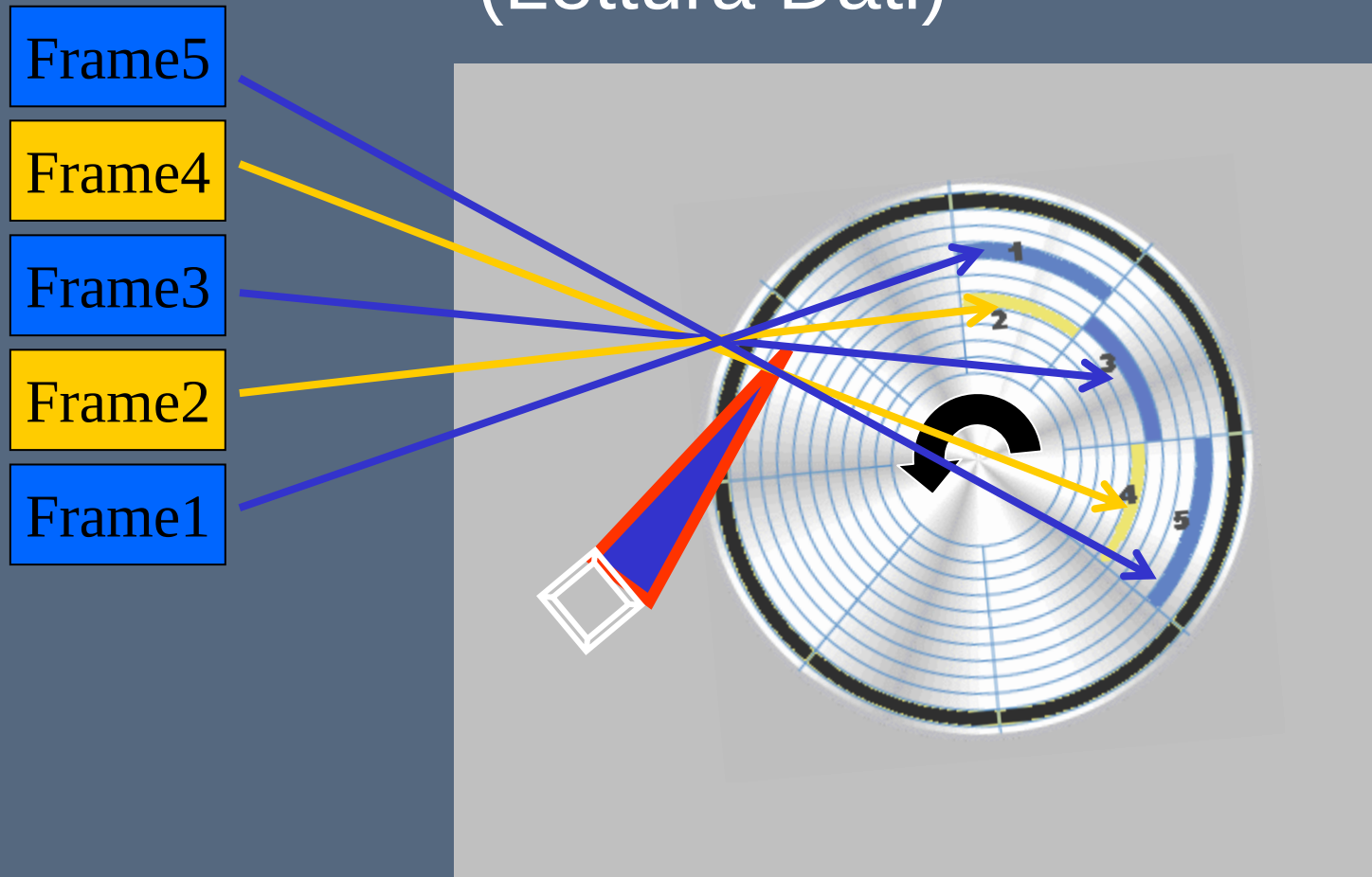
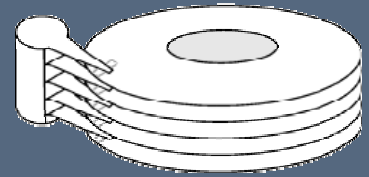
Frame3

Frame2

Frame1

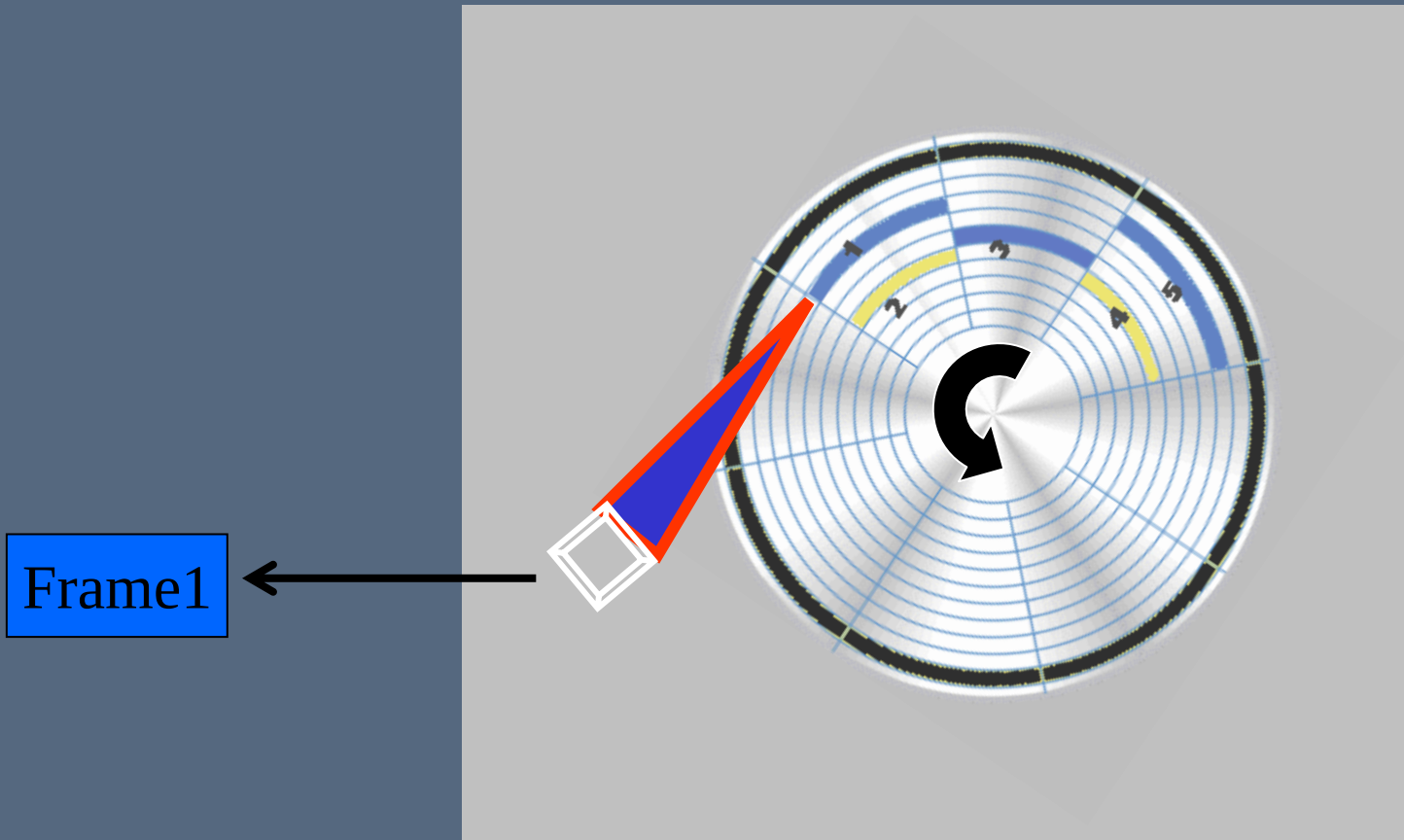
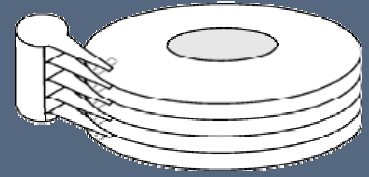


Perché "Non Lineare" ? (Lettura Dati)



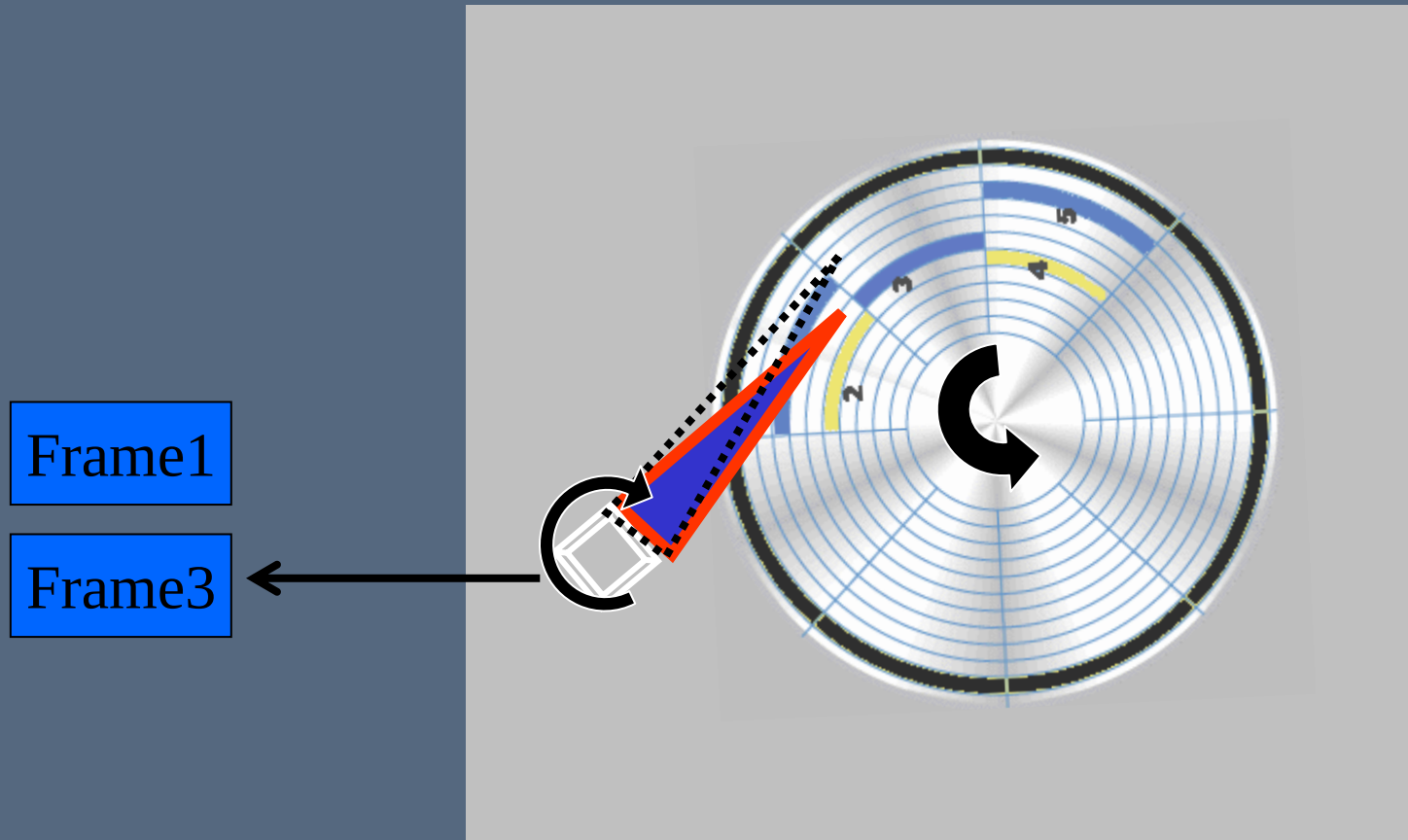
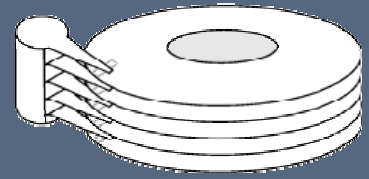
SONY

Perché “Non Lineare” ? (Lettura Dati)

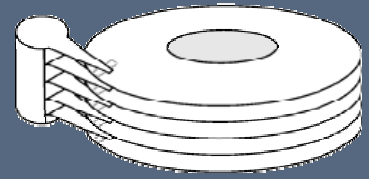


SONY

Perché “Non Lineare” ? (Lettura Dati)



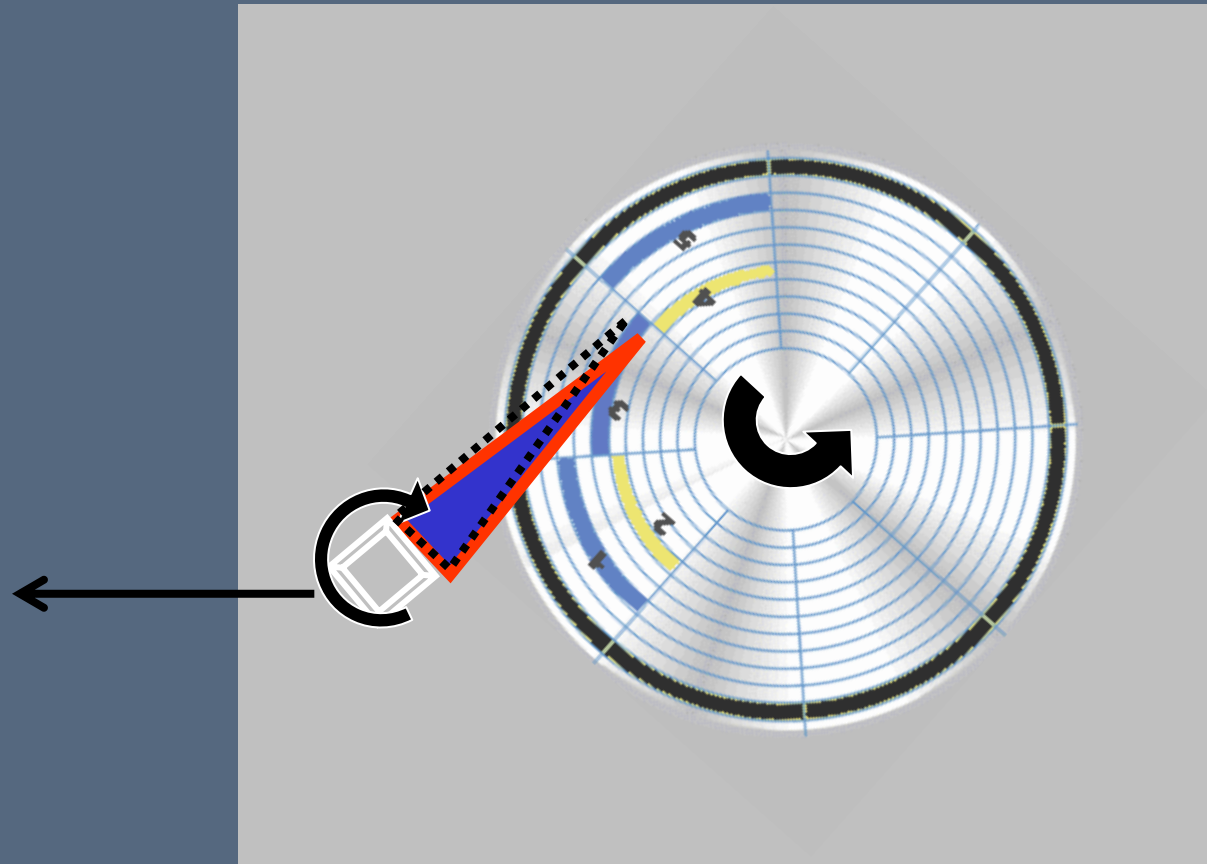
Perché "Non Lineare" ? (Lettura Dati)



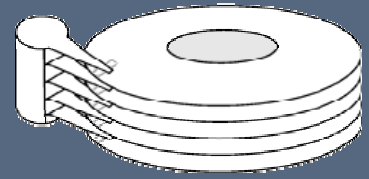
Frame1

Frame3

Frame4



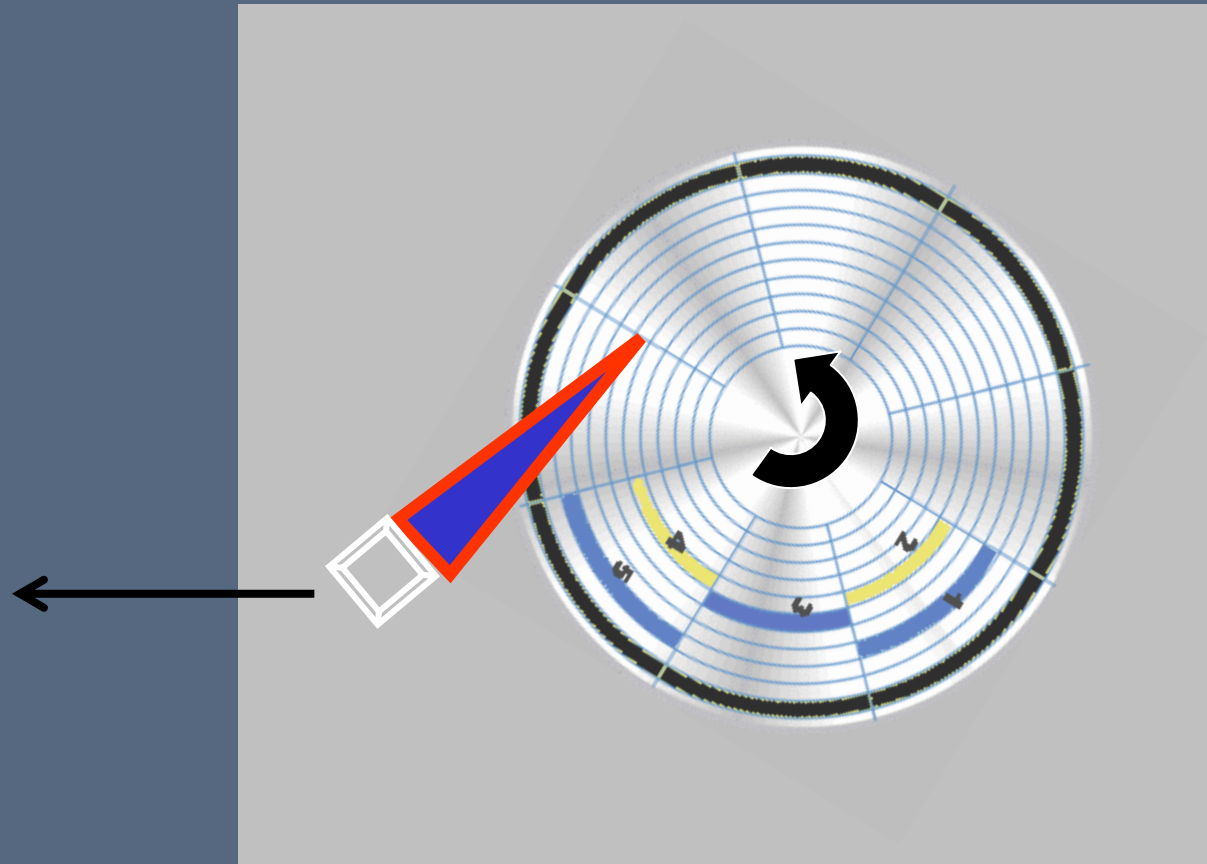
Perché "Non Lineare" ? (Lettura Dati)



Frame1

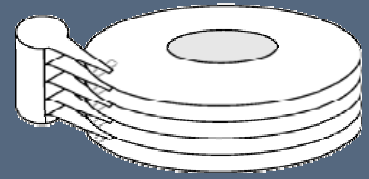
Frame3

Frame4



SONY

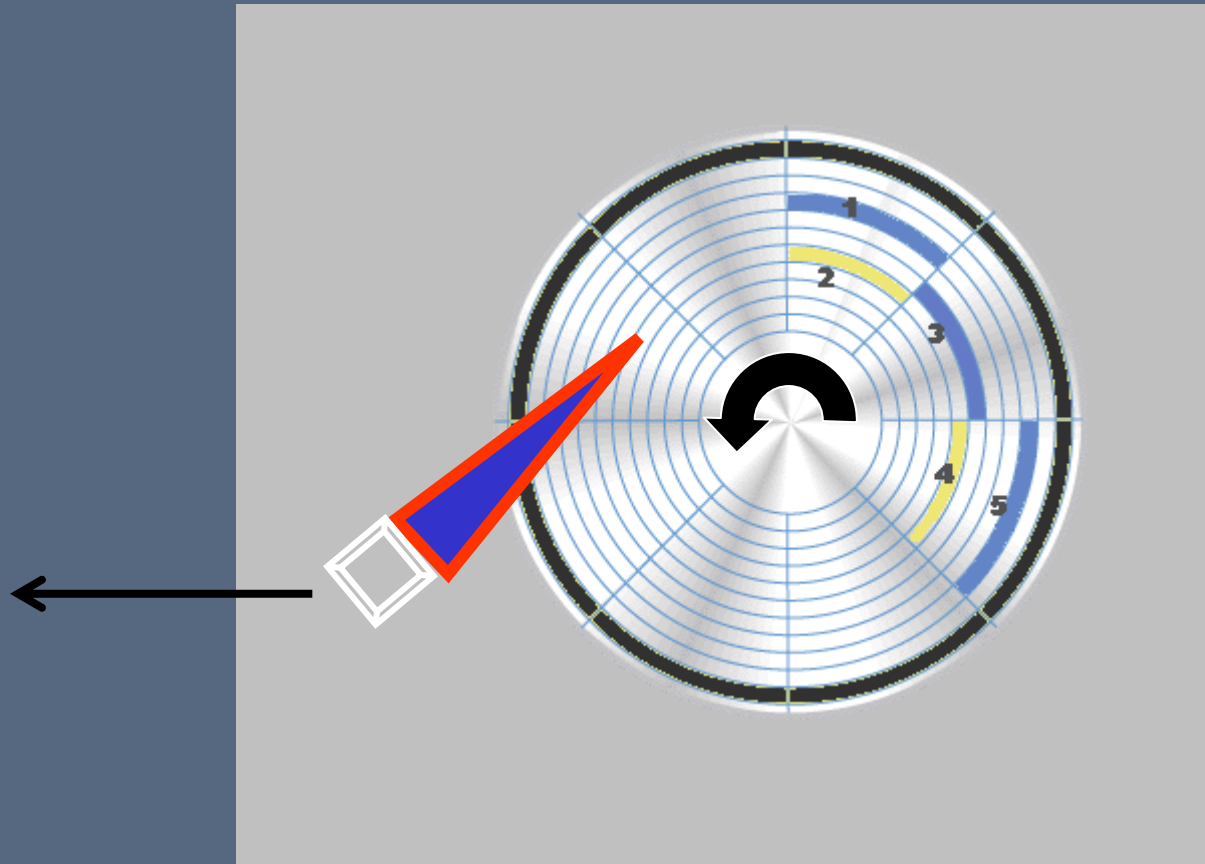
Perché “Non Lineare” ? (Lettura Dati)



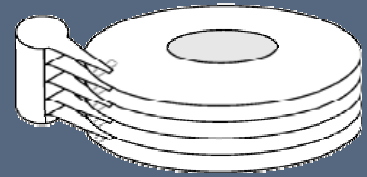
Frame1

Frame3

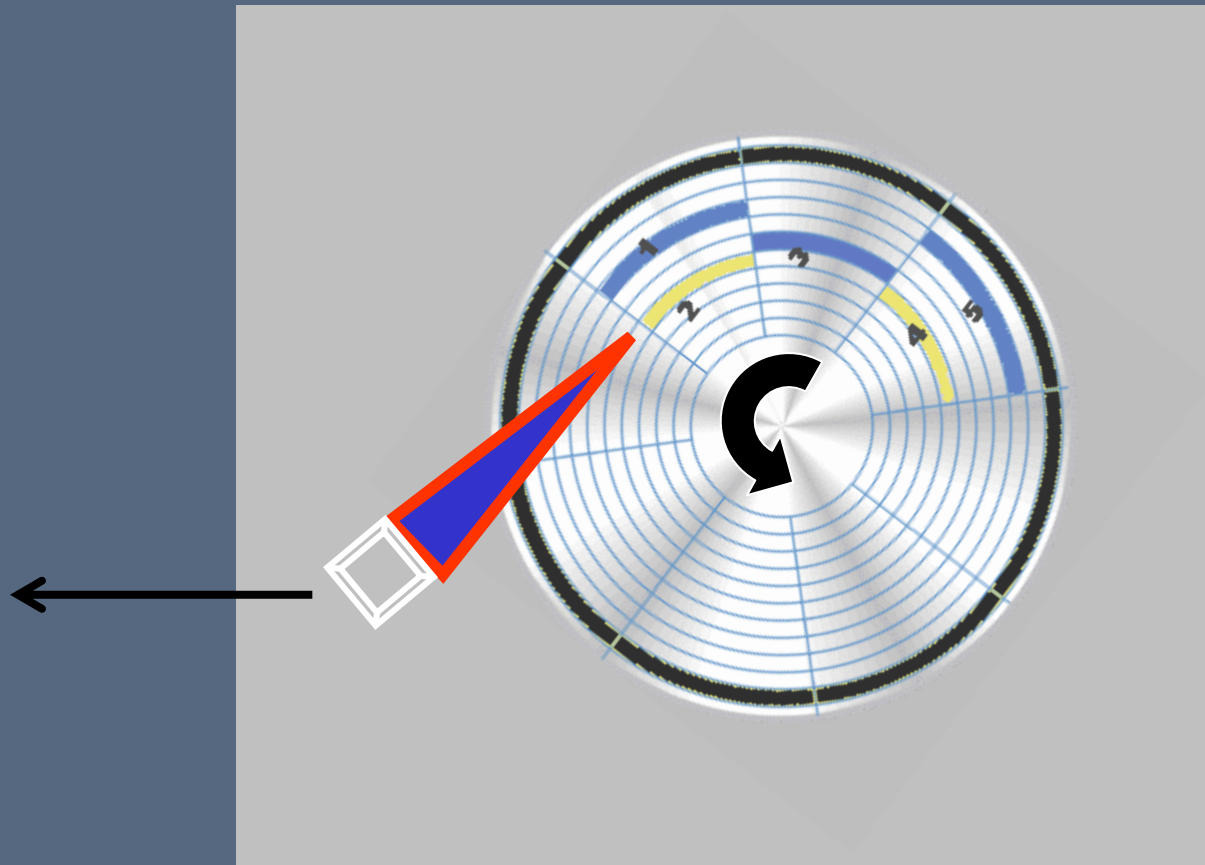
Frame4



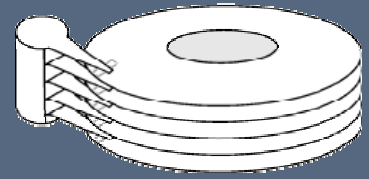
Perché "Non Lineare" ? (Lettura Dati)



- Frame1
- Frame3
- Frame4
- Frame2



Perché "Non Lineare" ? (Lettura Dati)



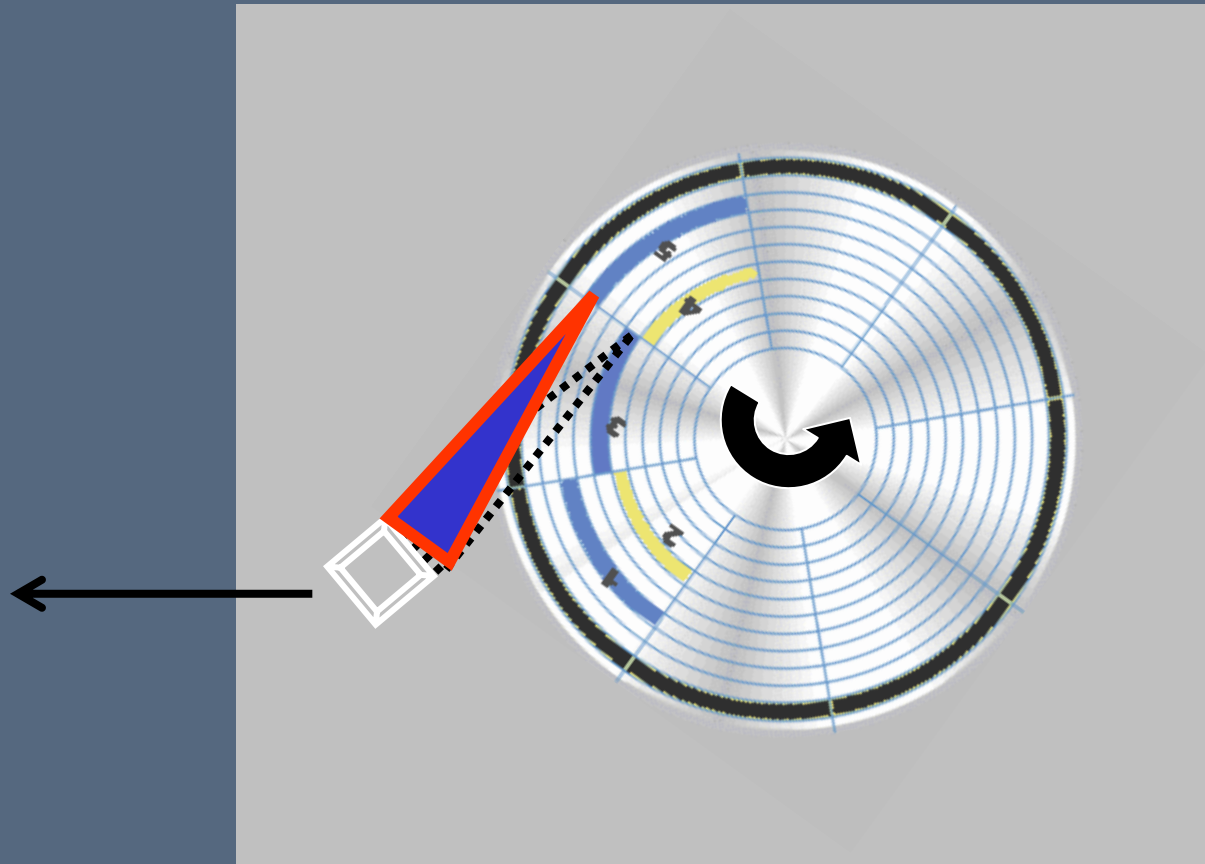
Frame1

Frame3

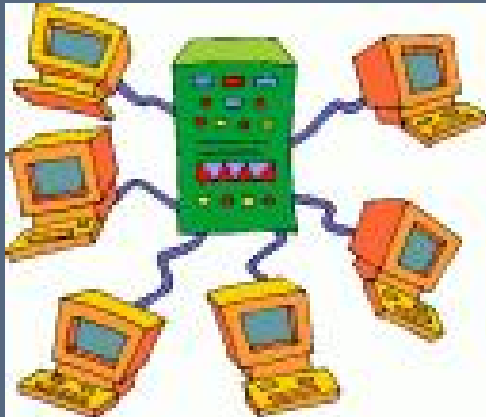
Frame4

Frame2

Frame5



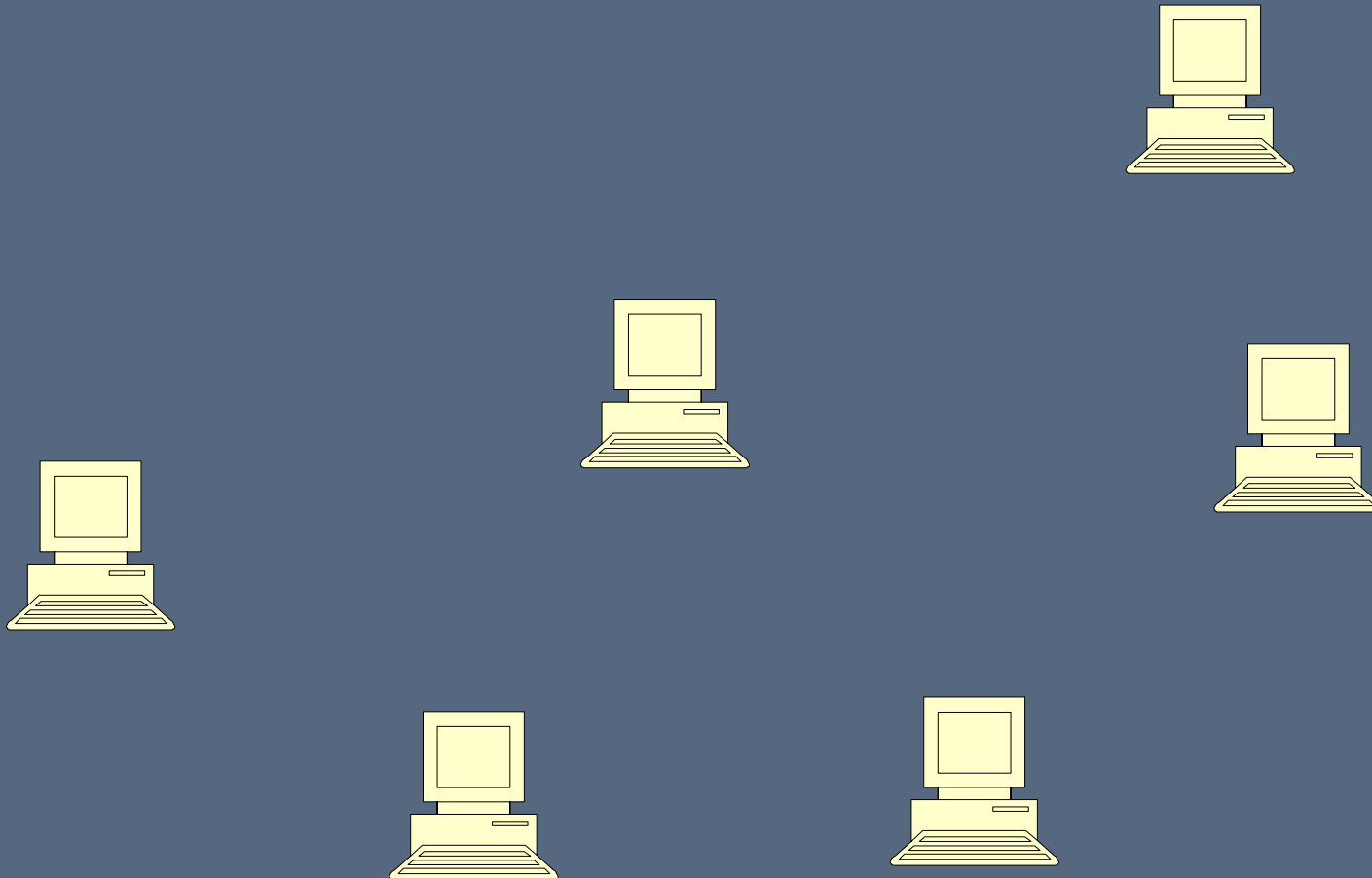
Networking



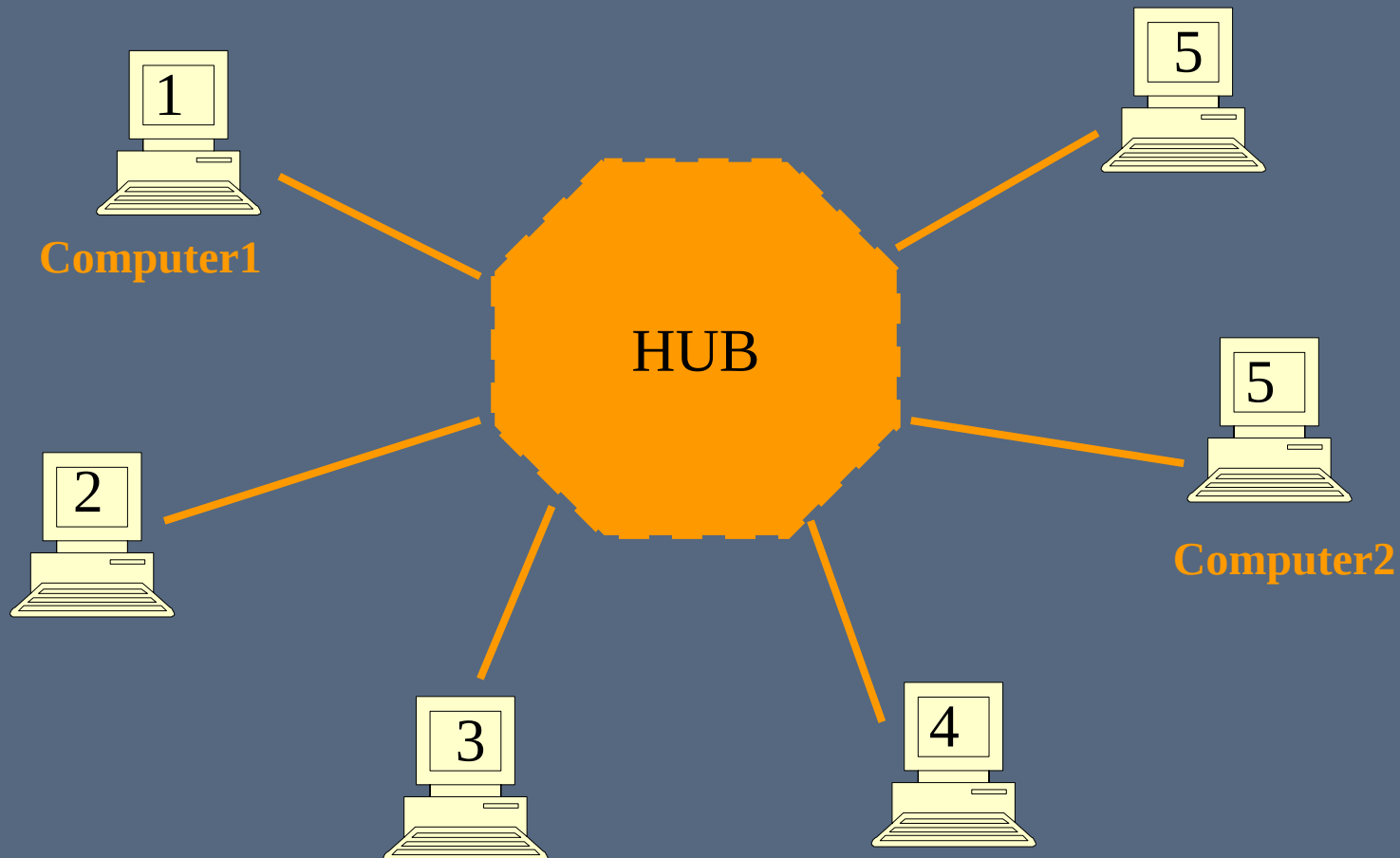
- E' il sistema per mettere in comunicazione due o più computer
- Serve per condividere informazioni (es. Filmati A/V)
- Caratteristiche di una rete

SONY

Cosa è una rete di computer ? “NETWORK”

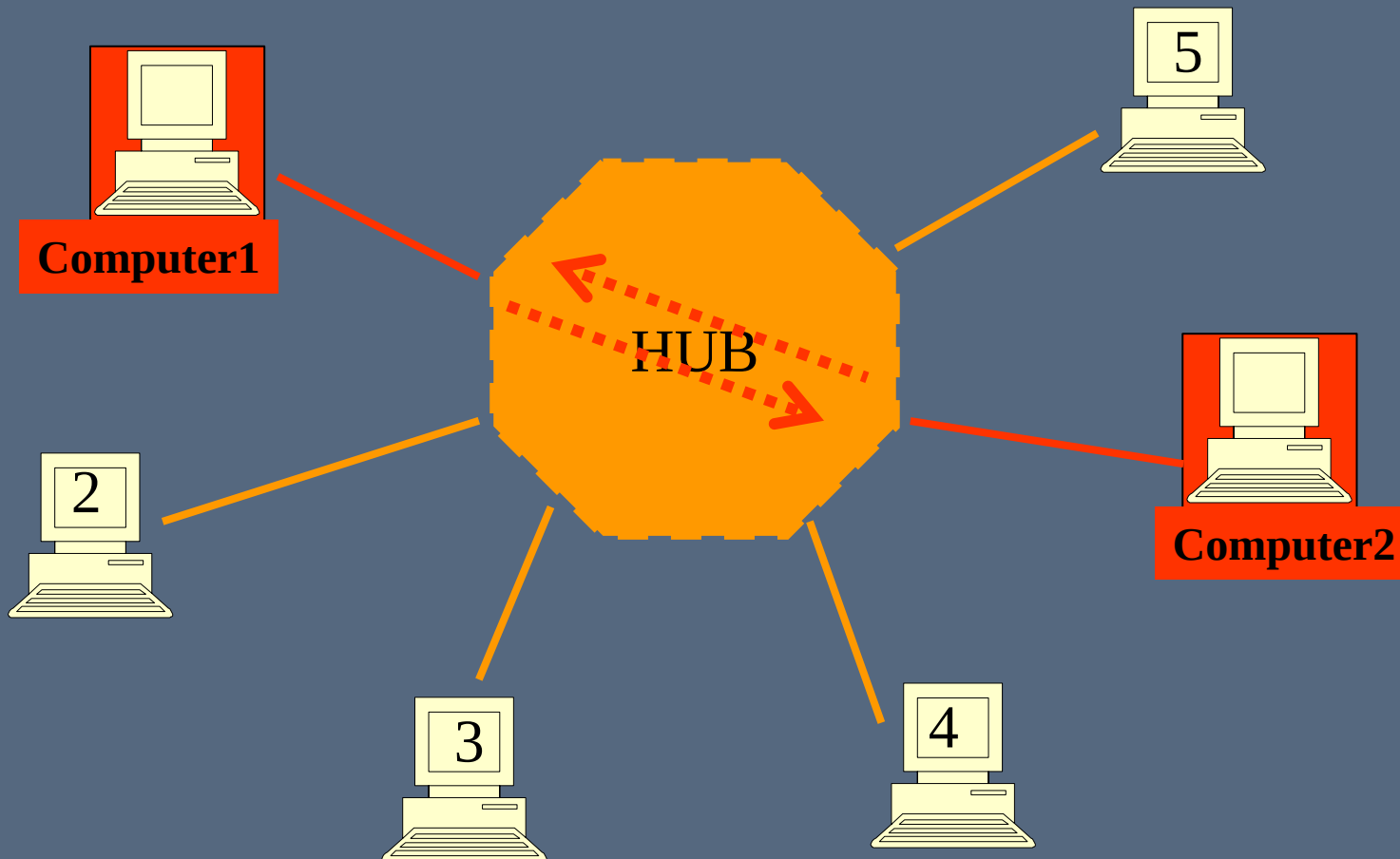


Cosa è una rete di computer ? “NETWORK”



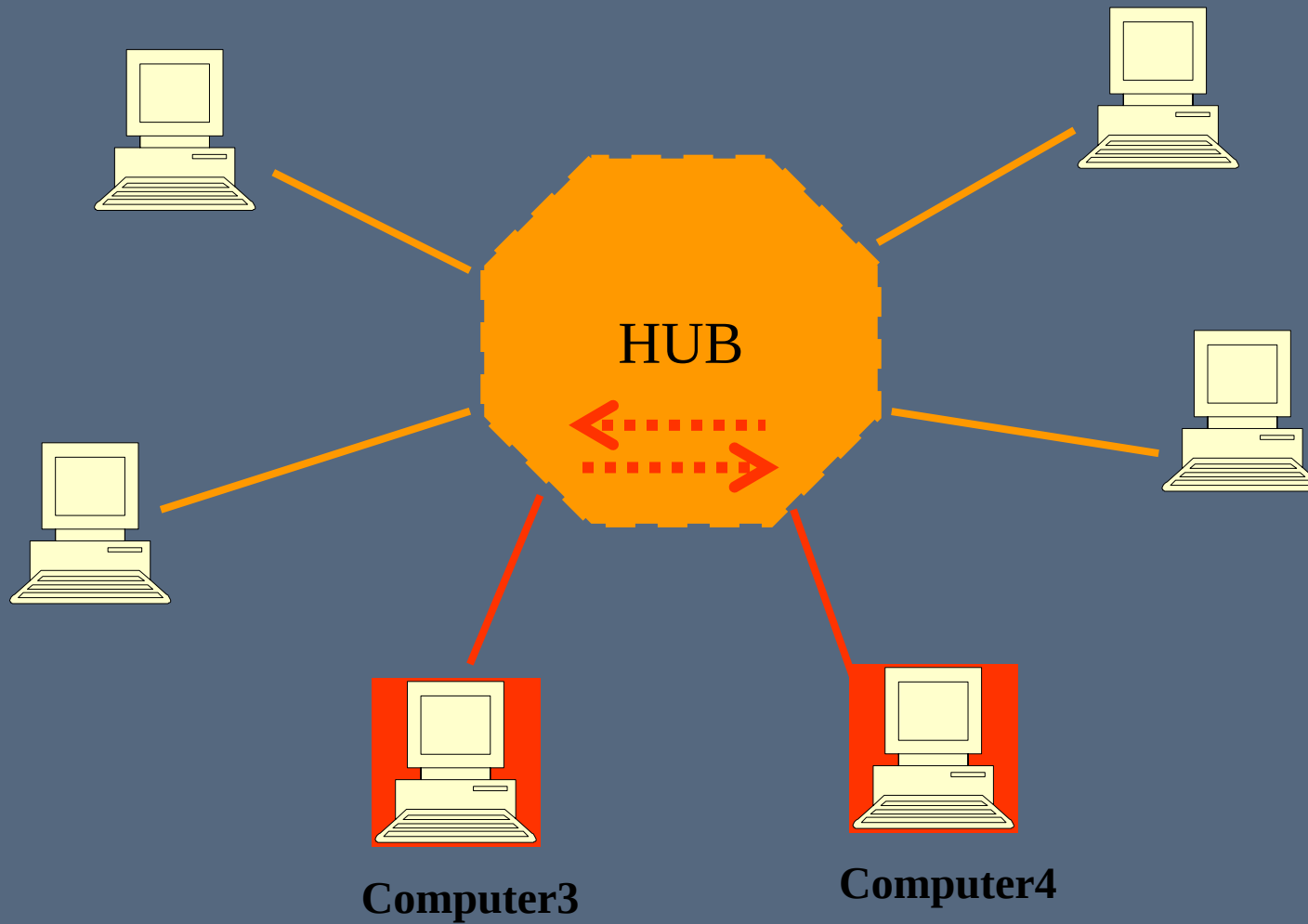
SONY

Cosa è una rete di computer ? “NETWORK”



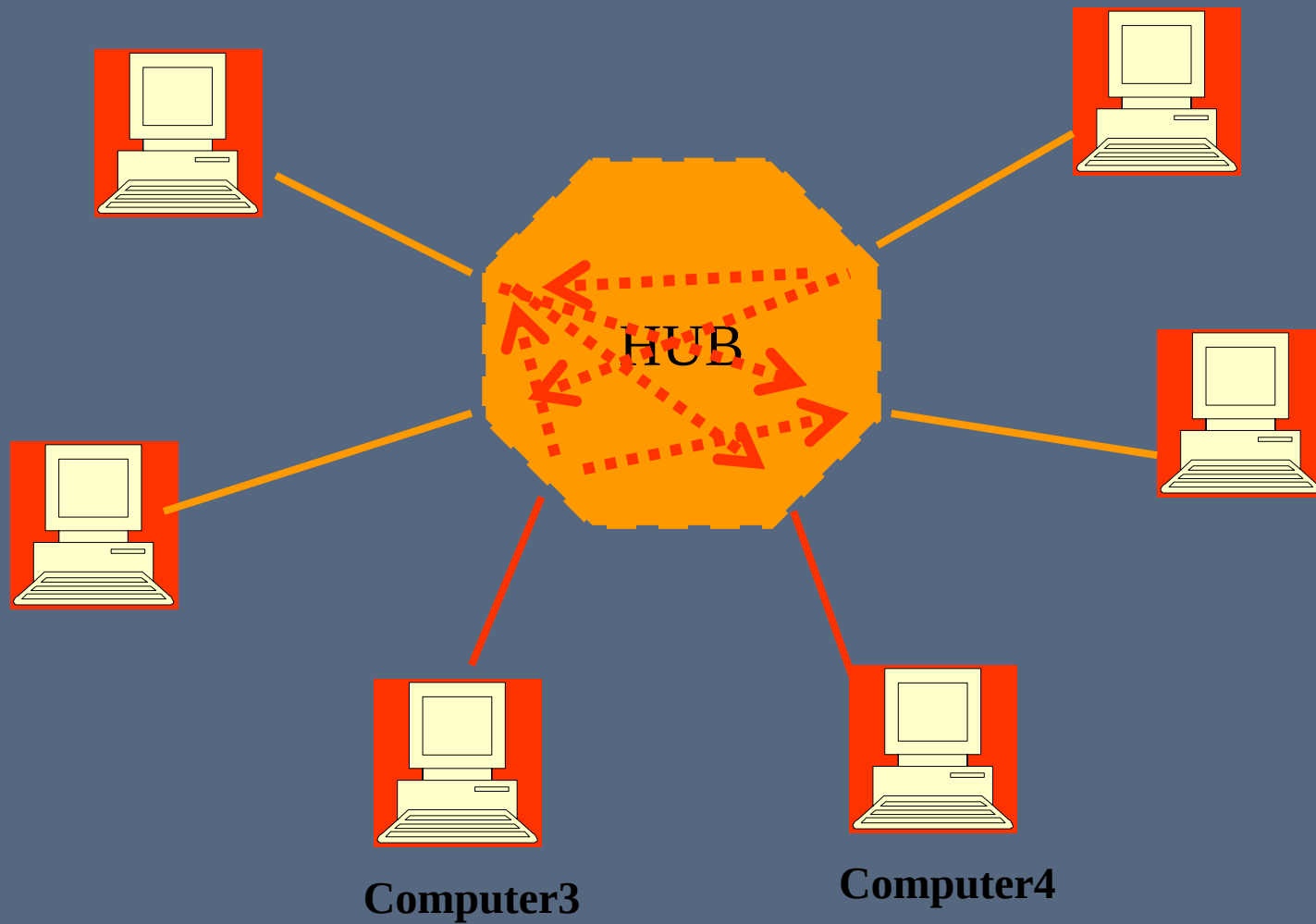
SONY

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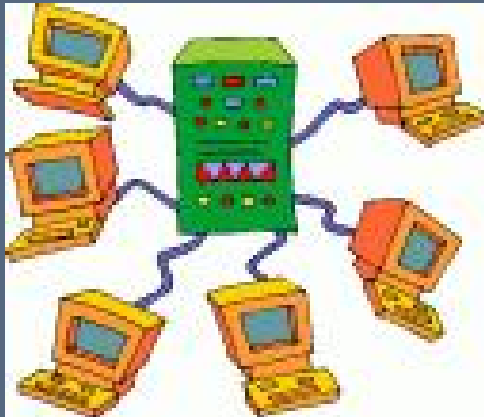


SONY

Cosa è una rete di computer ? “NETWORK”



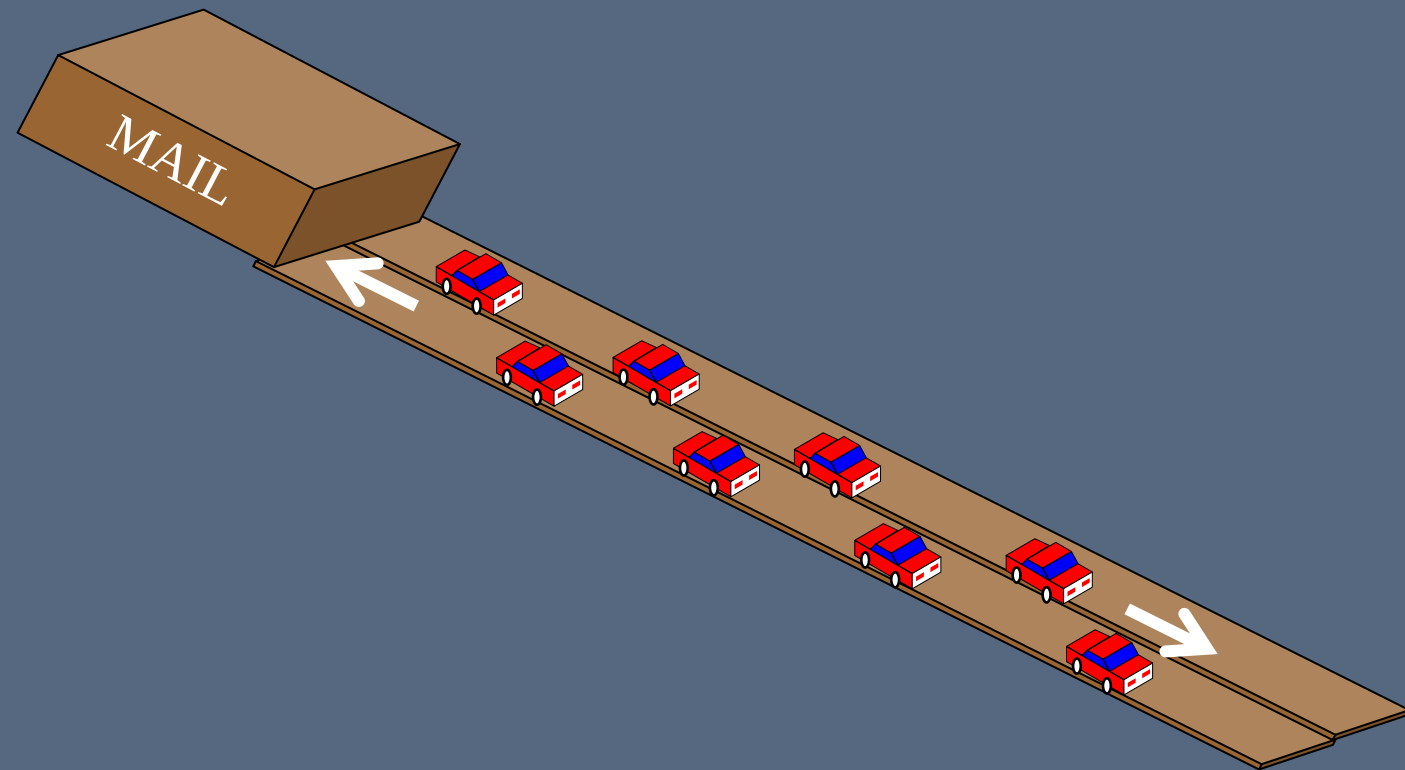
Networking



- E' il sistema per mettere in comunicazione due o più computer
- Serve per condividere informazioni (es. Filmati A/V)
- Caratteristiche di una rete

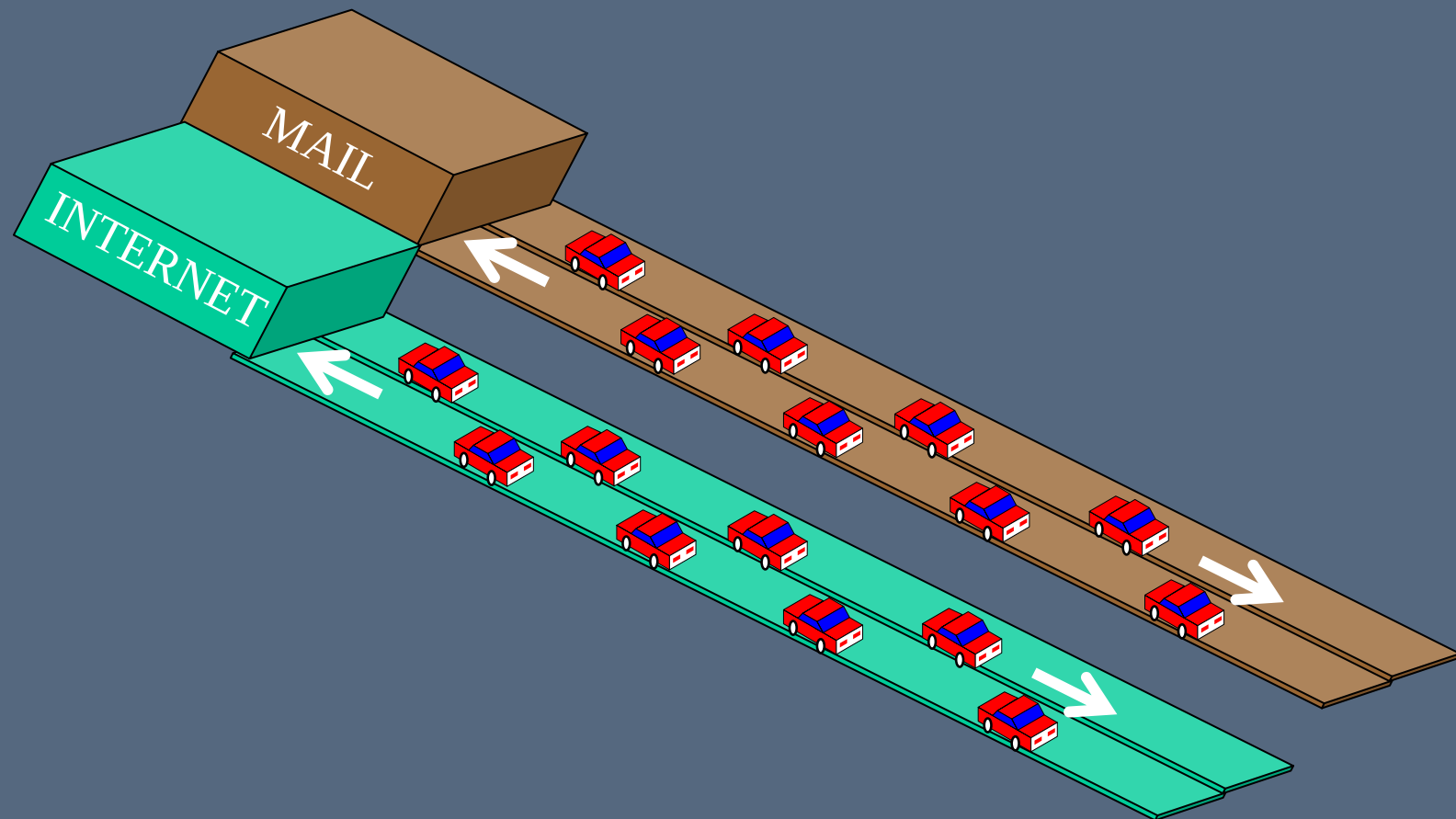
SONY

Cosa è una rete di computer ? "TCP-IP"



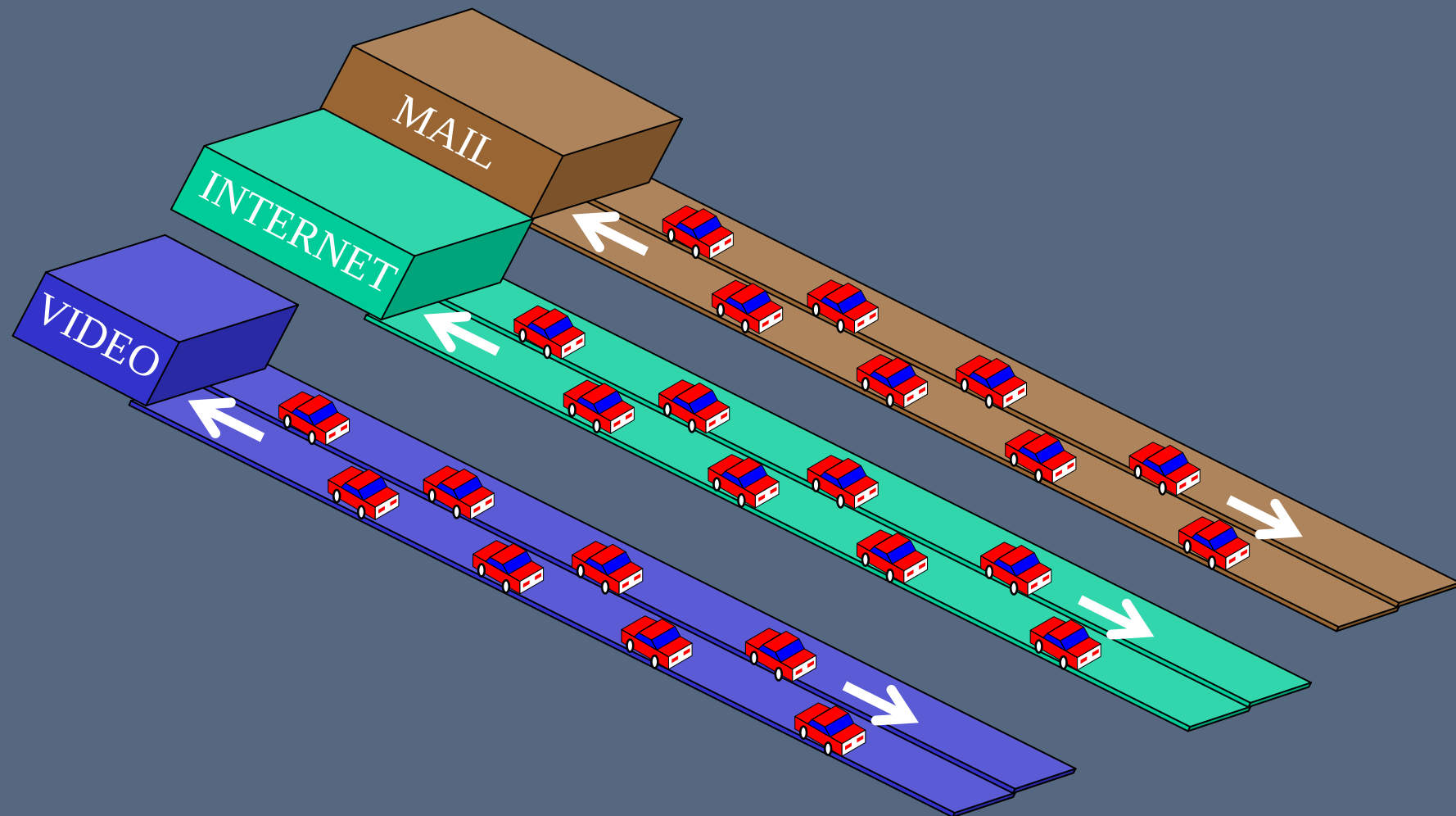
SONY

Cosa è una rete di computer ? "TCP-IP"



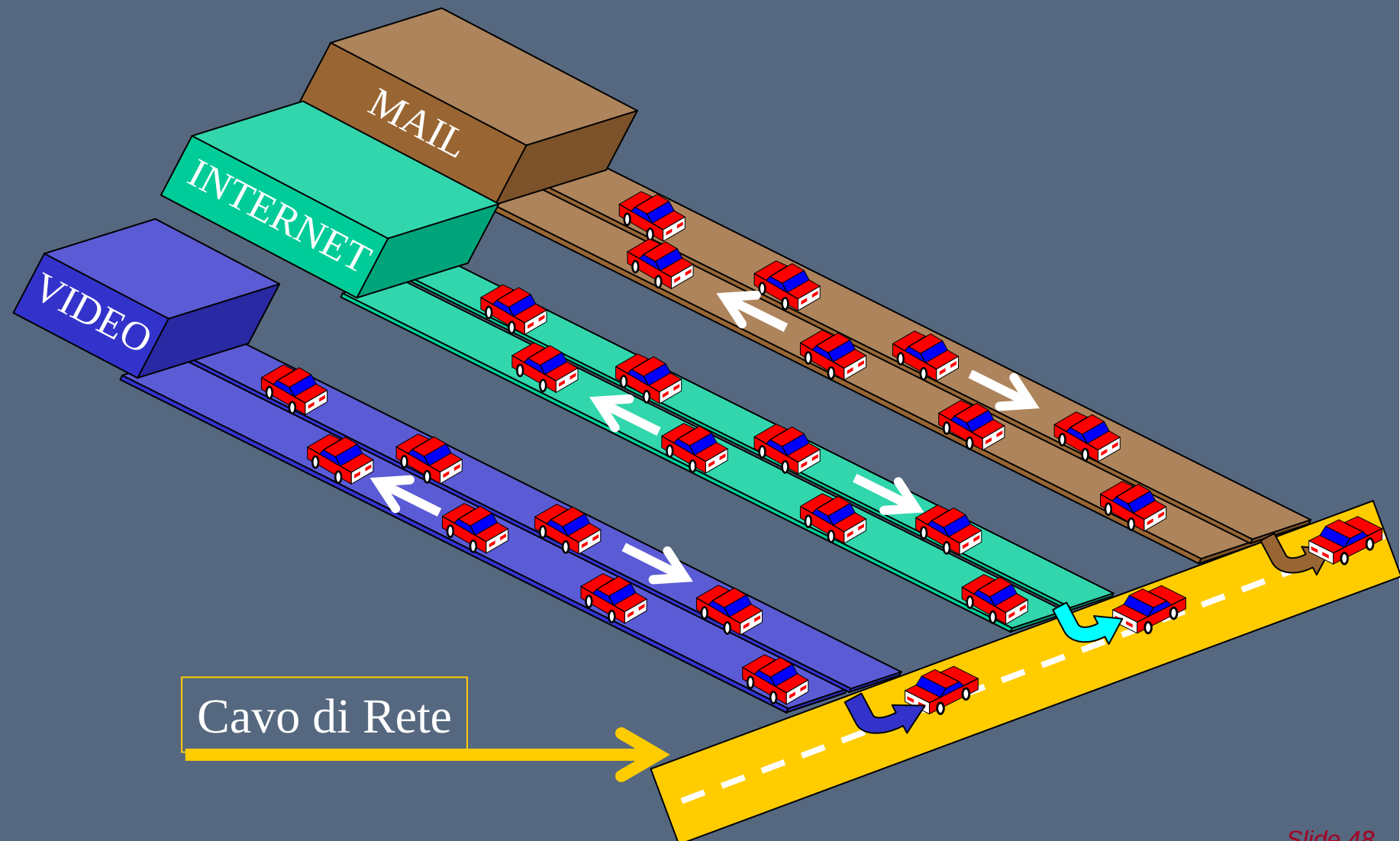
SONY

Cosa è una rete di computer ? “TCP-IP”



SONY

Cosa è una rete di computer ? "TCP-IP"



Video “EDITING”



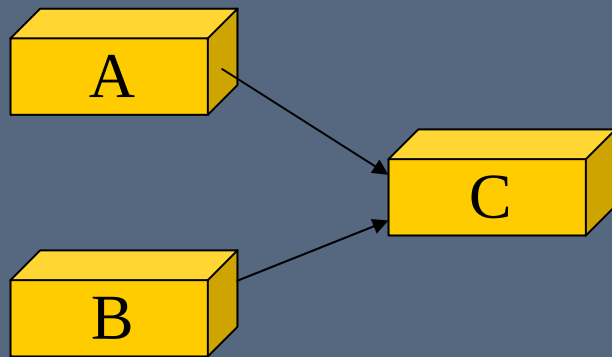
Encoder
MPEG



HDD

- Digitalizza il video (MPEG)
- E lo memorizzo su un supporto non lineare (HDD)

Video "EDITING"

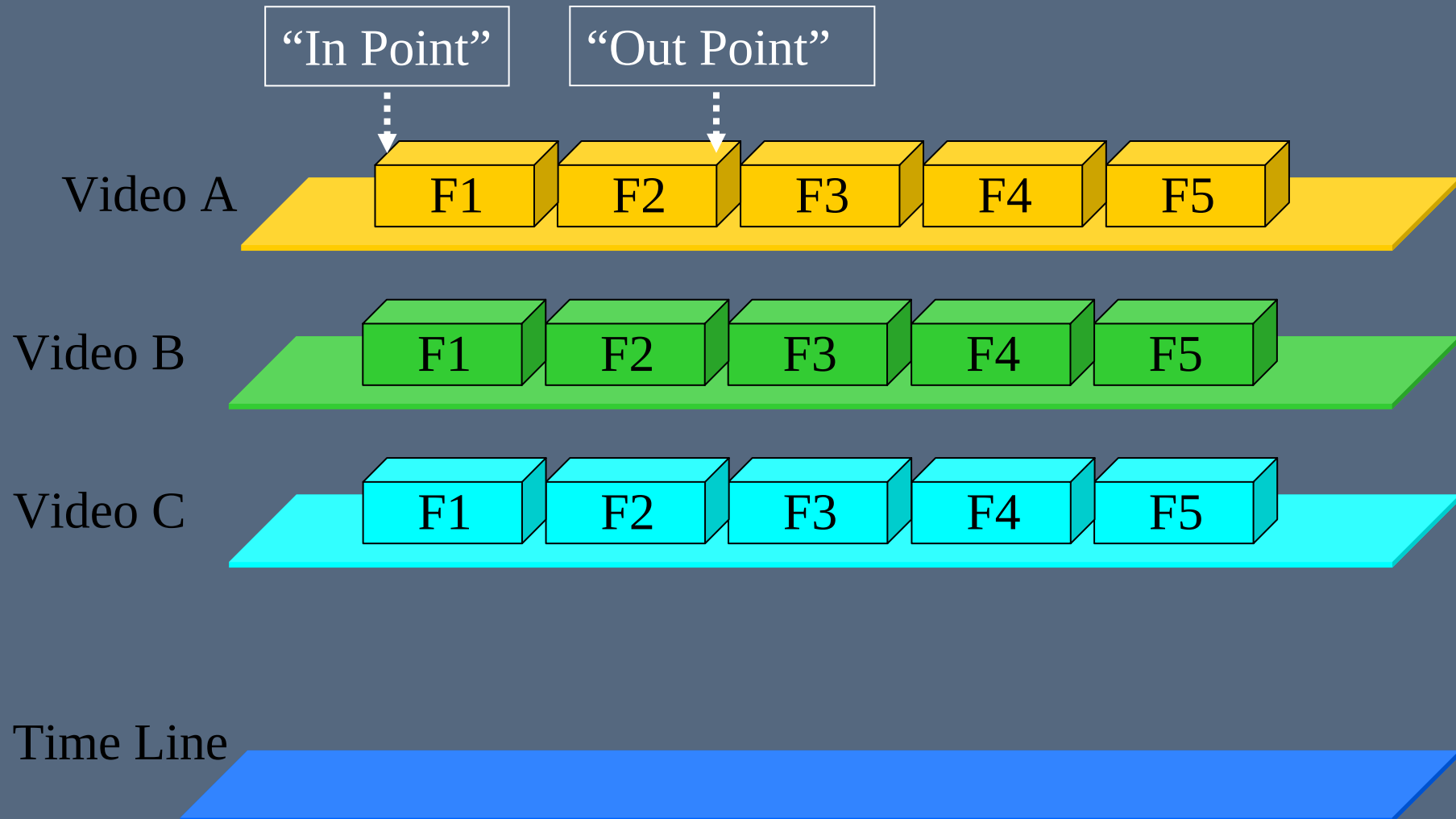


- Digitalizza il video (MPEG)
- E lo memorizzo su un supporto non lineare (HDD)
- Esegui l' "EDITING"

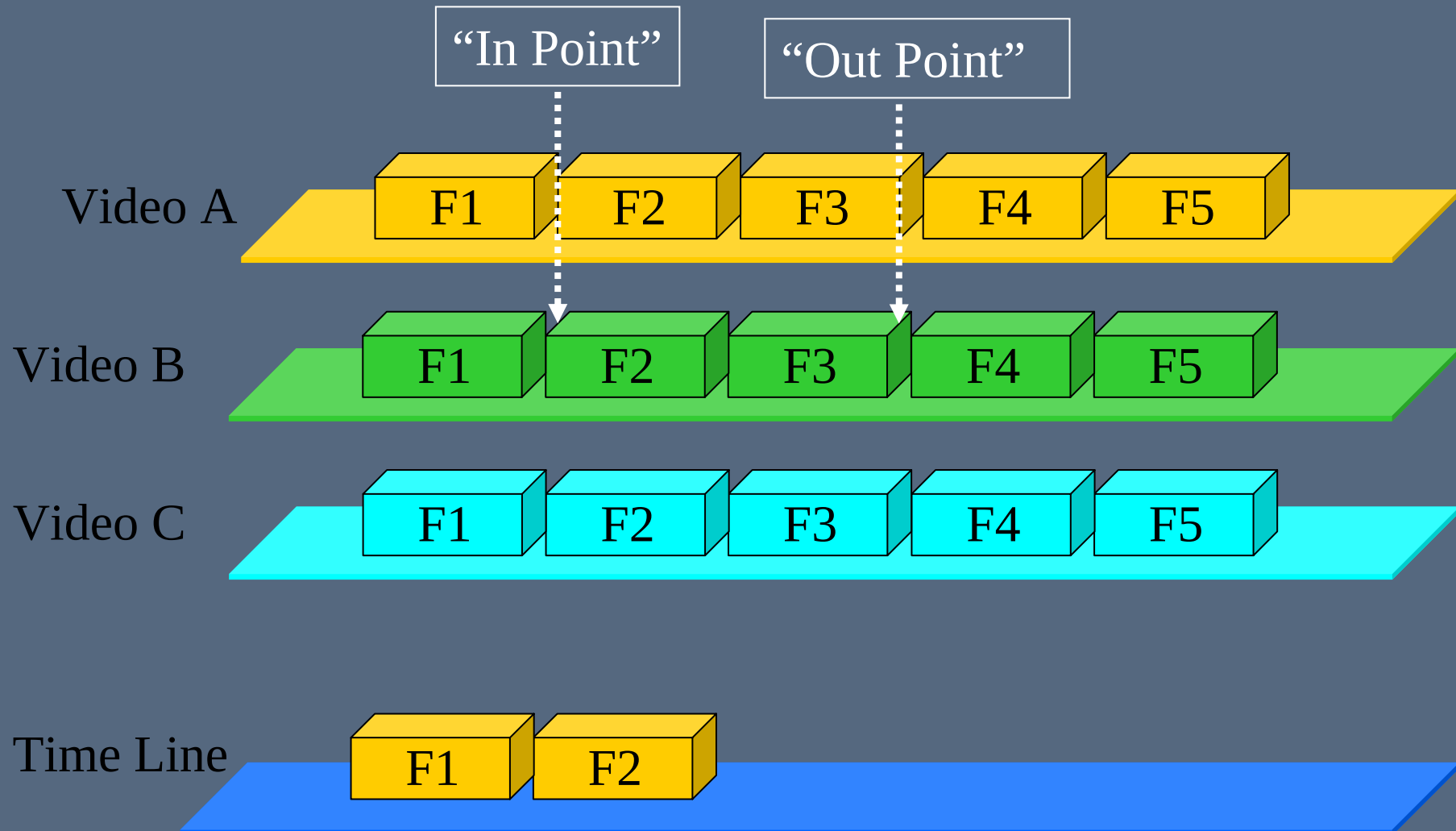
Video “EDITING” (Non Linear Editing)

- Digitalizza il video (MPEG)
- Esegui “Editing”
- - Redigitize at hi-res
- - Output to tape
- - Save the EDL for the future

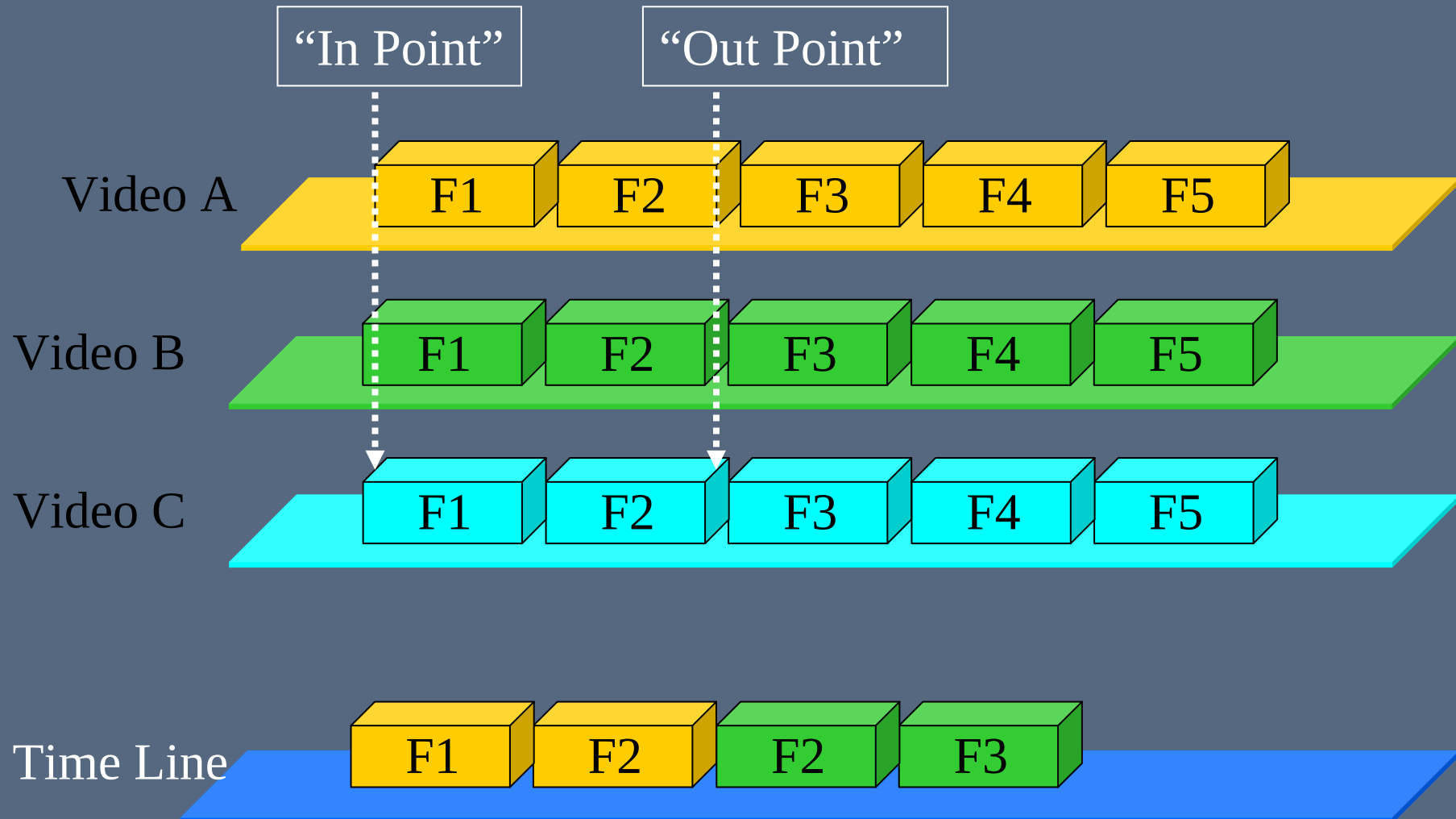
Video "EDITING" (Non Linear Editing)



Video "EDITING" (Non Linear Editing)



Video "EDITING" (Non Linear Editing)

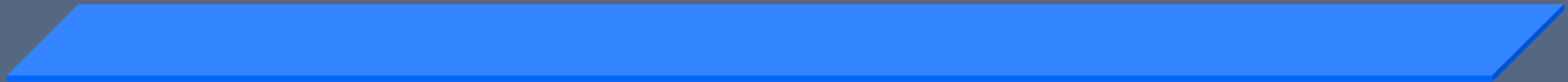


SONY

Video “EDITING” (Insert)



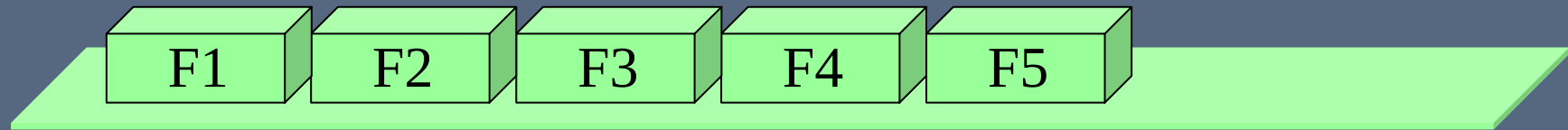
Video A



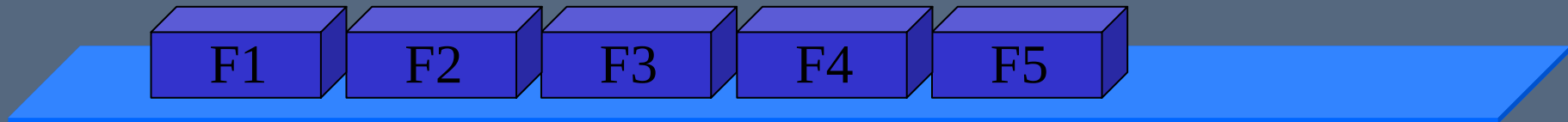
Time Line

SONY

Video "EDITING" (Insert)



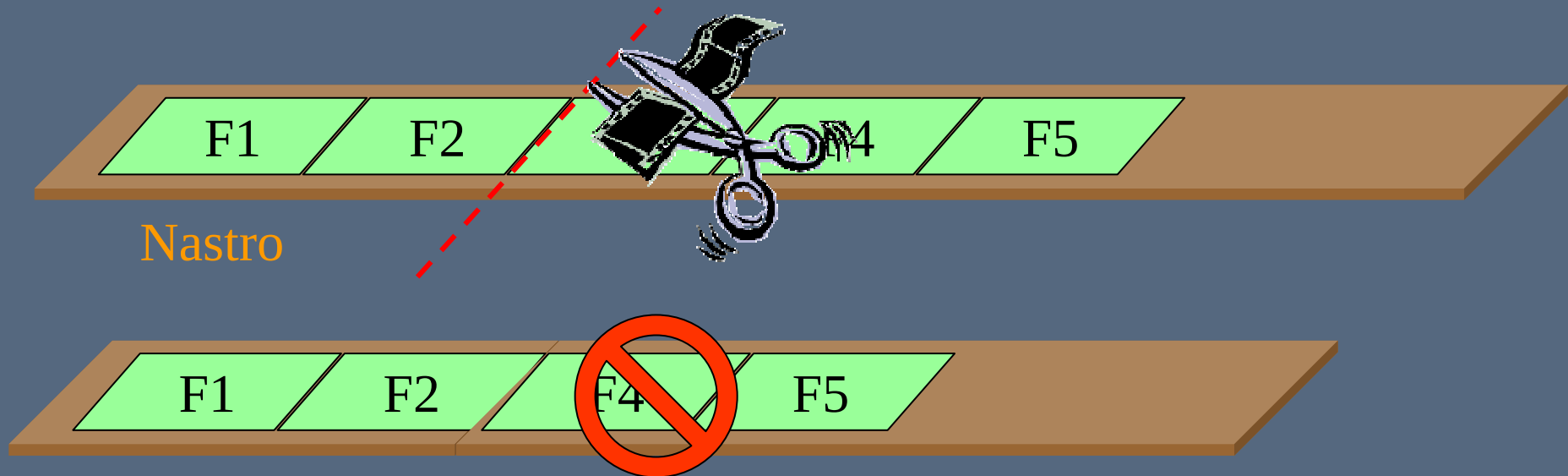
Video B



Time Line

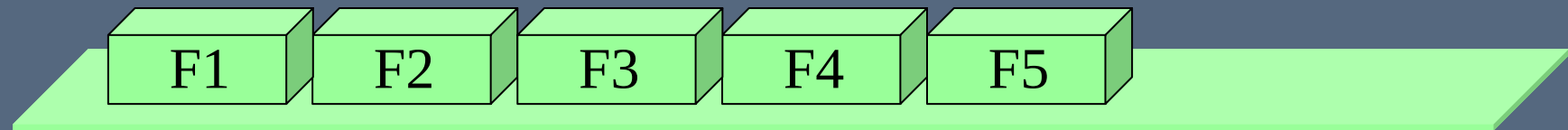
SONY

Video “EDITING” (Linear Editing)

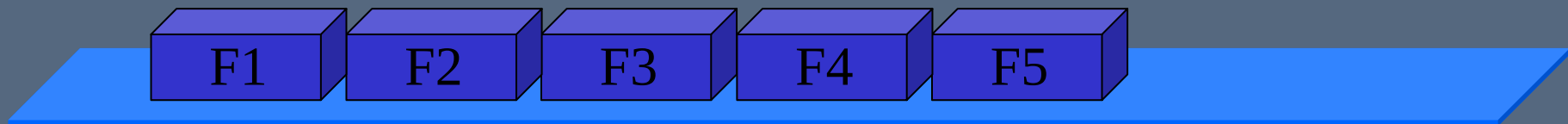


SONY

Video "EDITING" (Assemble)



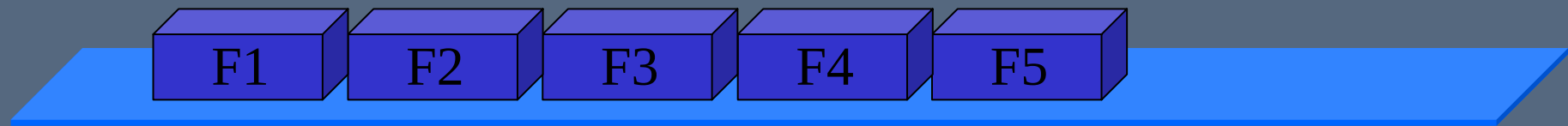
Video B



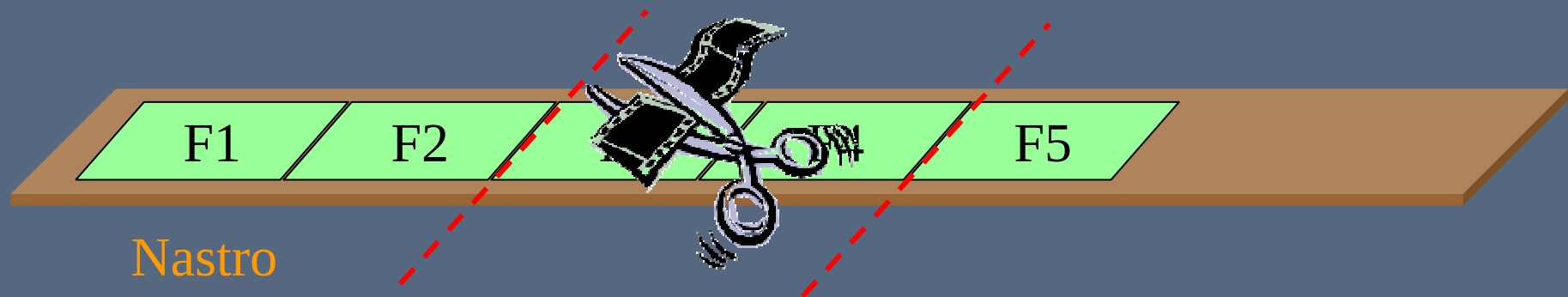
Time Line

SONY

Video “EDITING” (Delete)



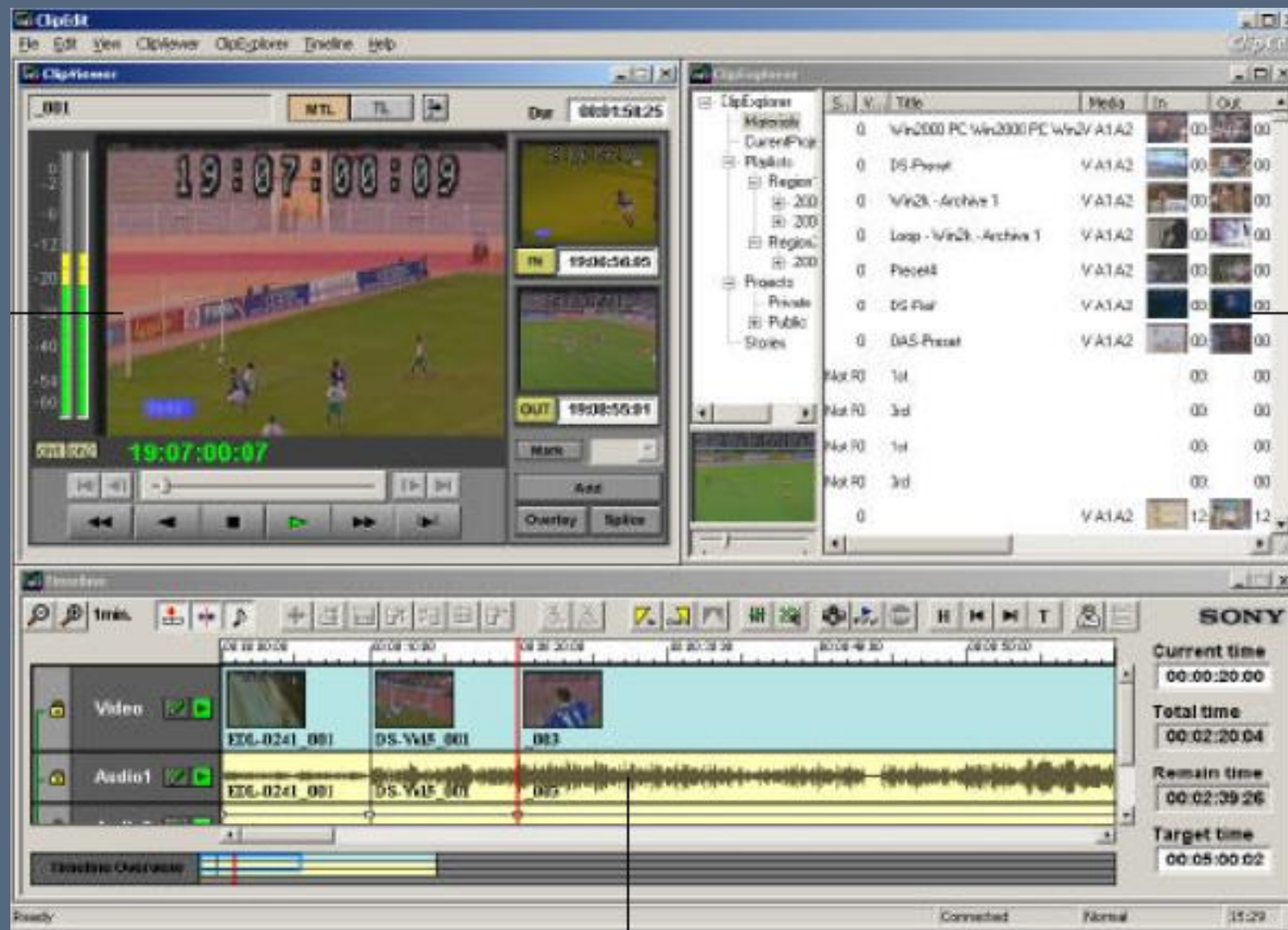
Time Line



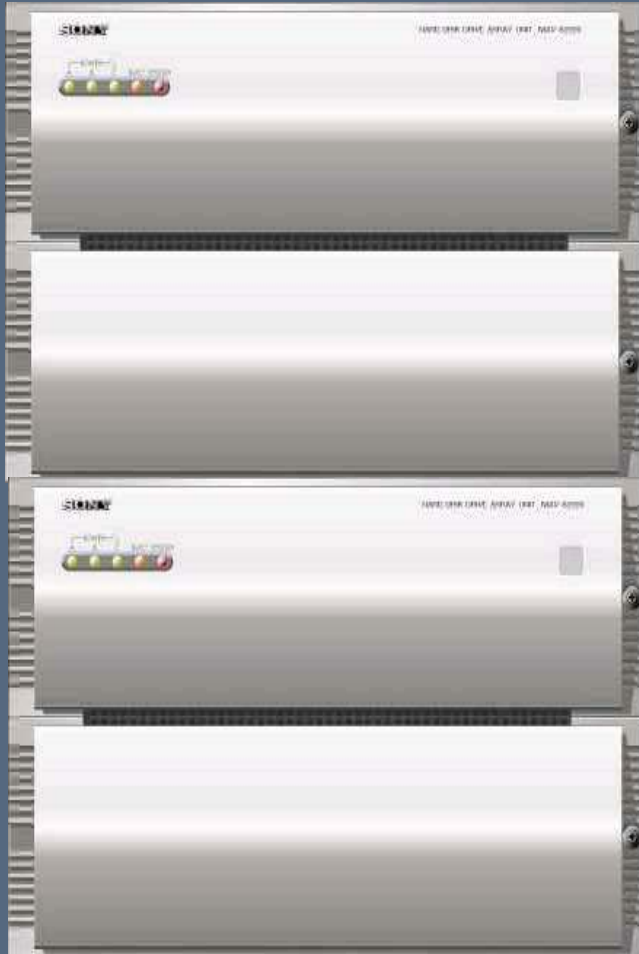
Nastro

SONY

Video “EDITING” (L’interfaccia Grafica “ClipEdit”)

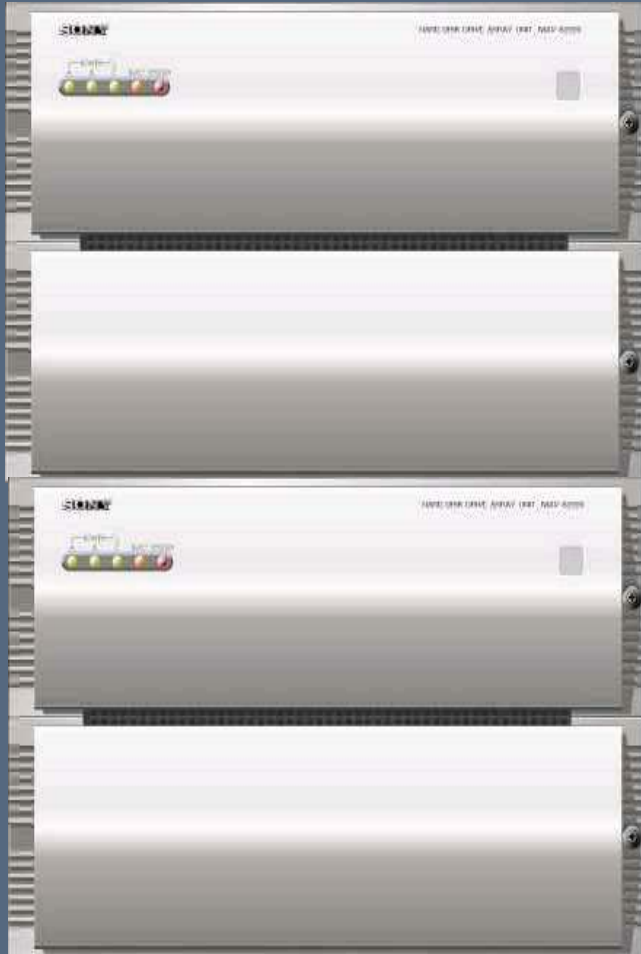


Il Video Server



- Registra Video e Audio su supporti digitali (Hard Disk)
- Utilizza le tecnologie RAID per garantire la ridondanza dei dati registrati.
- Permette di registrare molte ore di materiale video
- Permette l'accesso simultaneo di più utenti
- Il materiale è subito disponibile anche durante l'aquisizione

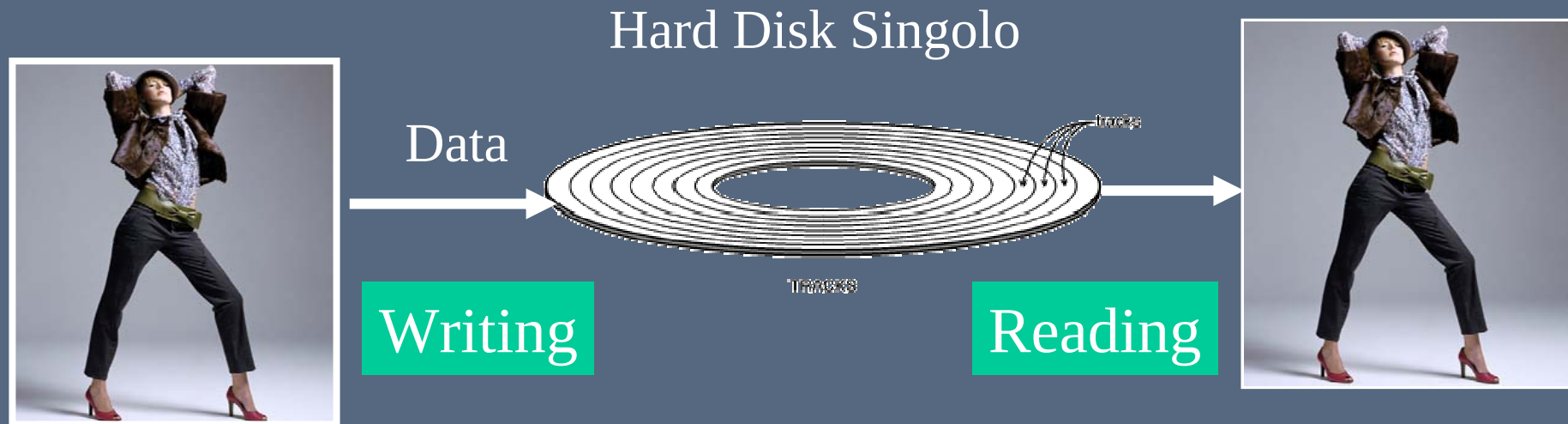
Il Video Server



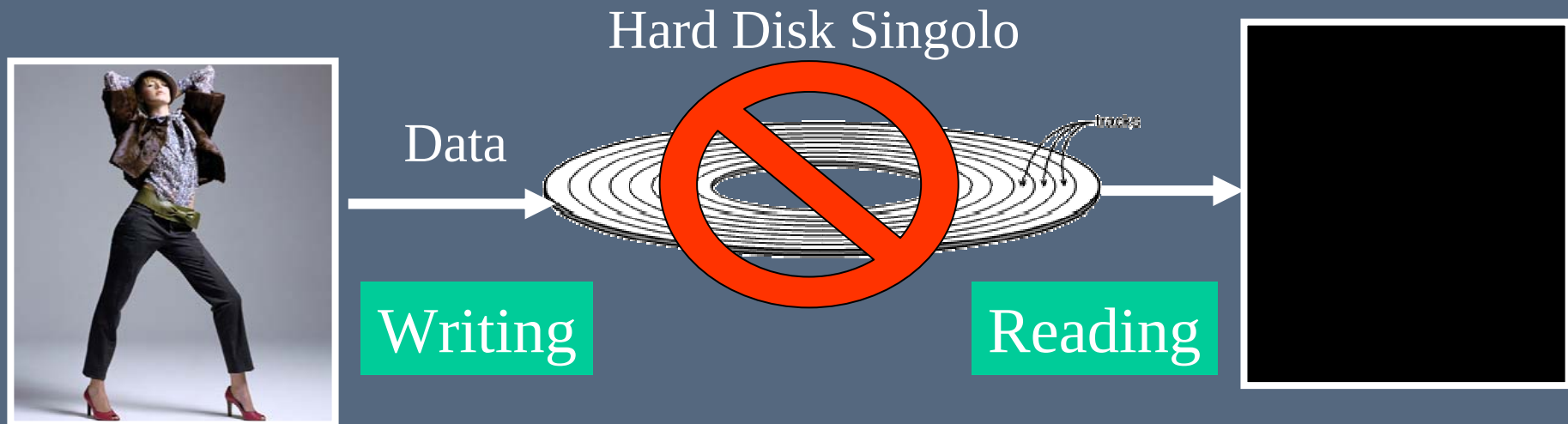
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SONY

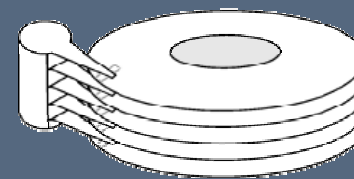
Il Video Server (Il Sistema RAID)



Il Video Server (Il Sistema RAID)



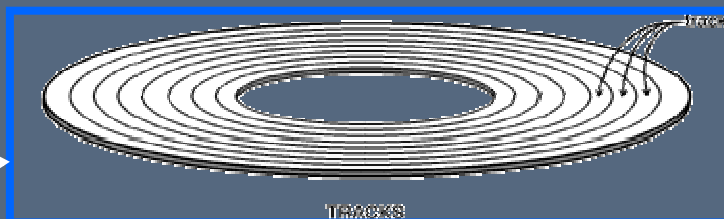
Il Video Server (Il Sistema RAID)



Frame



Data1



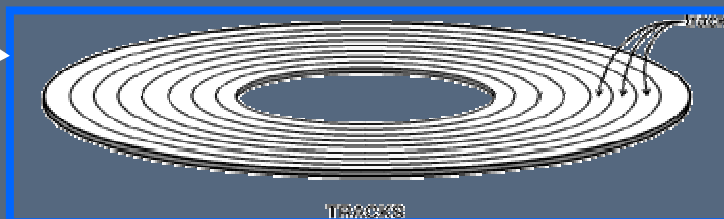
Disco 1

Data2



Disco 2

Data3

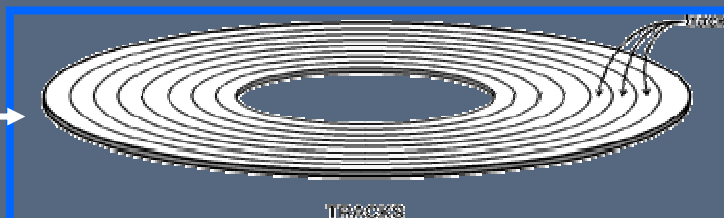


Disco 3

Parità

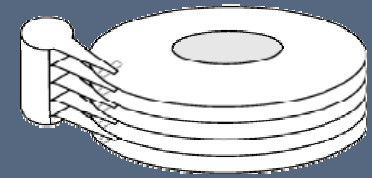


Data1 +
Data2 +
Data3 =



Disco 4
(Parità)

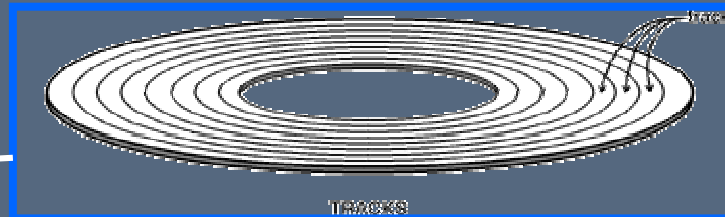
Il Video Server (Il Sistema RAID)



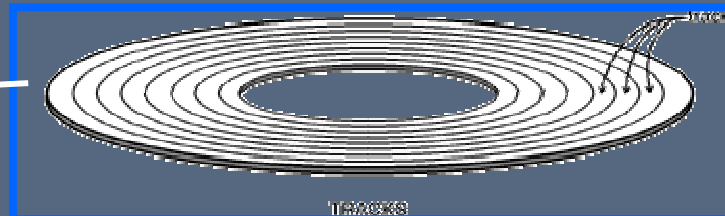
Data1

Data2

Data1+Data2+Parità



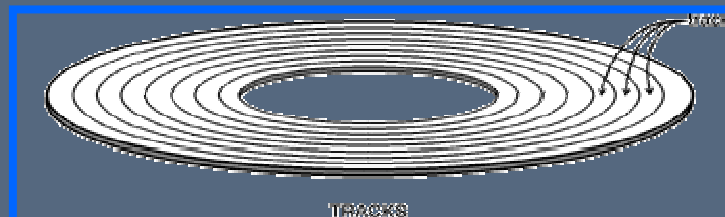
Disco 1



Disco 2



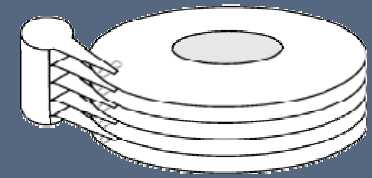
Disco 3



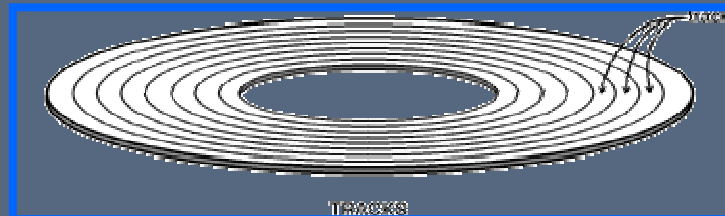
Disco 4
(Parità)

SONY

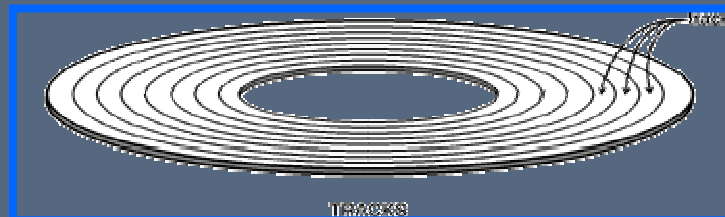
Il Video Server (Il Sistema RAID)



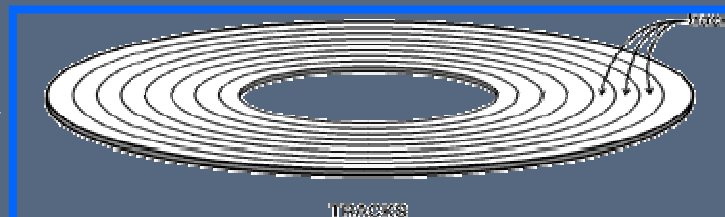
Disco 1



Disco 2



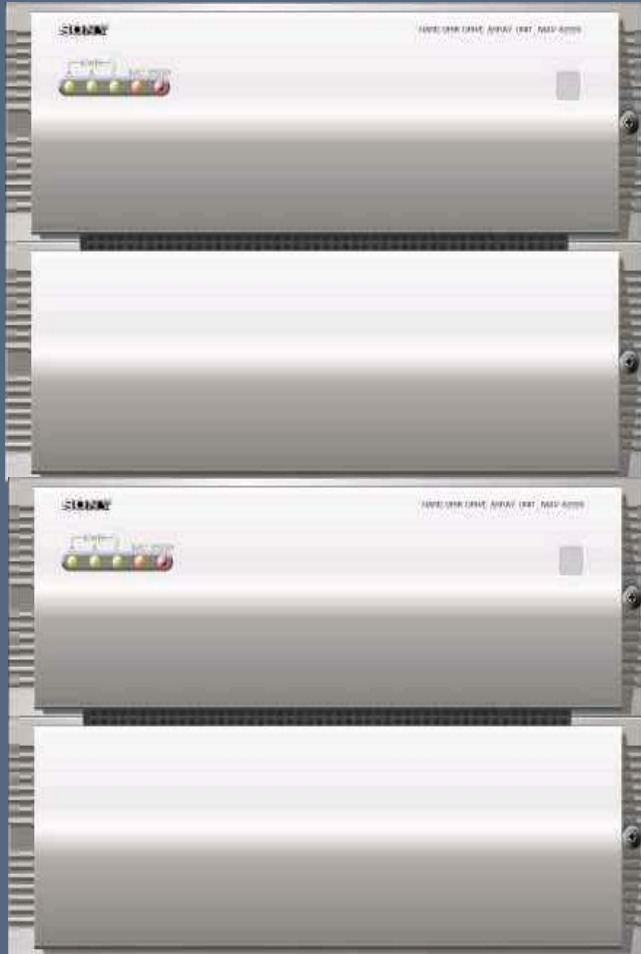
Disco 3



Disco 4
(Parità)



Il Video Server



- Utilizza le tecnologie RAID per garantire la ridondanza dei dati registrati.
- Permette di registrare molte ore di materiale Audio/video
- Permette l'accesso simultaneo di più utenti
- Il materiale è subito disponibile anche durante l'aquisizione

SONY

Il Video Server (Capacità di registrazione)

Unità RAID

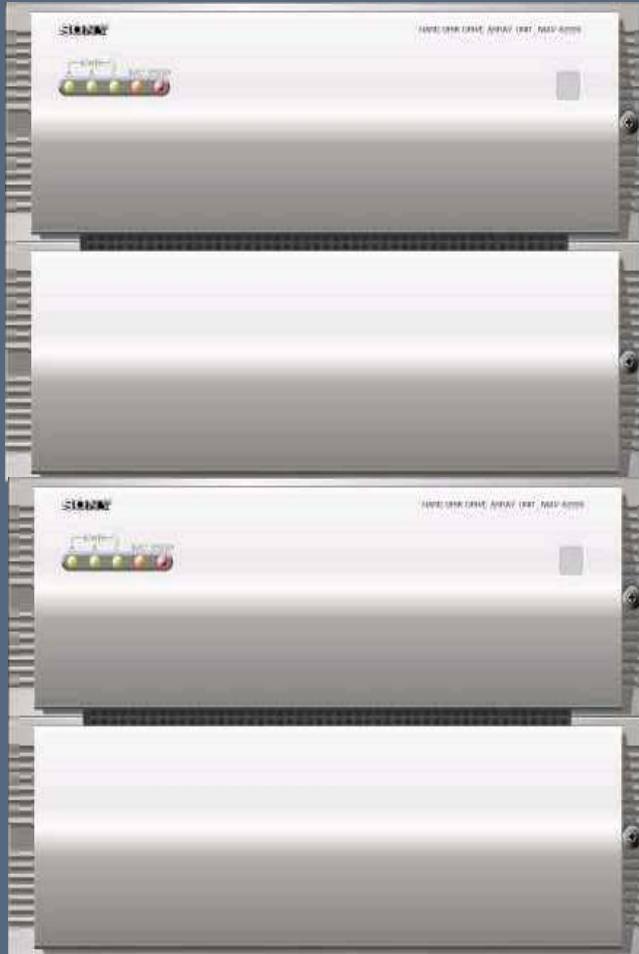
Il Video Server (Capacità di registrazione)

Unità RAID 5	10 Ore	TOT = 50 ORE
Unità RAID 4	10 Ore	
Unità RAID 3	10 Ore	
Unità RAID 2	10 Ore	
Unità RAID		

Il Video Server (Capacità di registrazione)

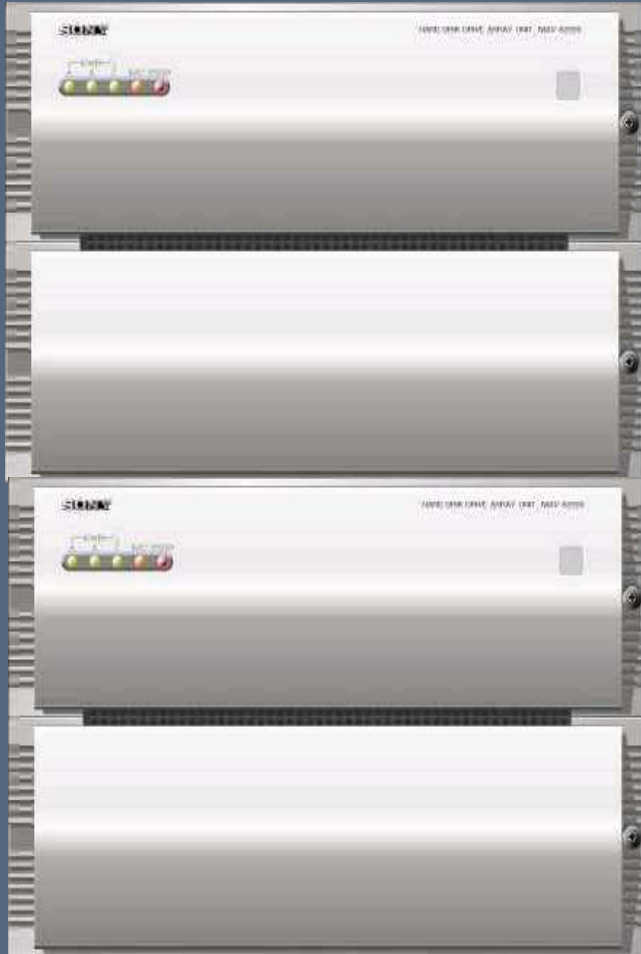


Il Video Server



- Utilizza le tecnologie RAID per garantire la ridondanza dei dati registrati.
- Permette di registrare molte ore di materiale Audio/video
- **I/O simultaneo:** Il materiale è subito disponibile anche durante l'aquisizione
- **Multiutenza:** Permette l'accesso simultaneo di più utenti

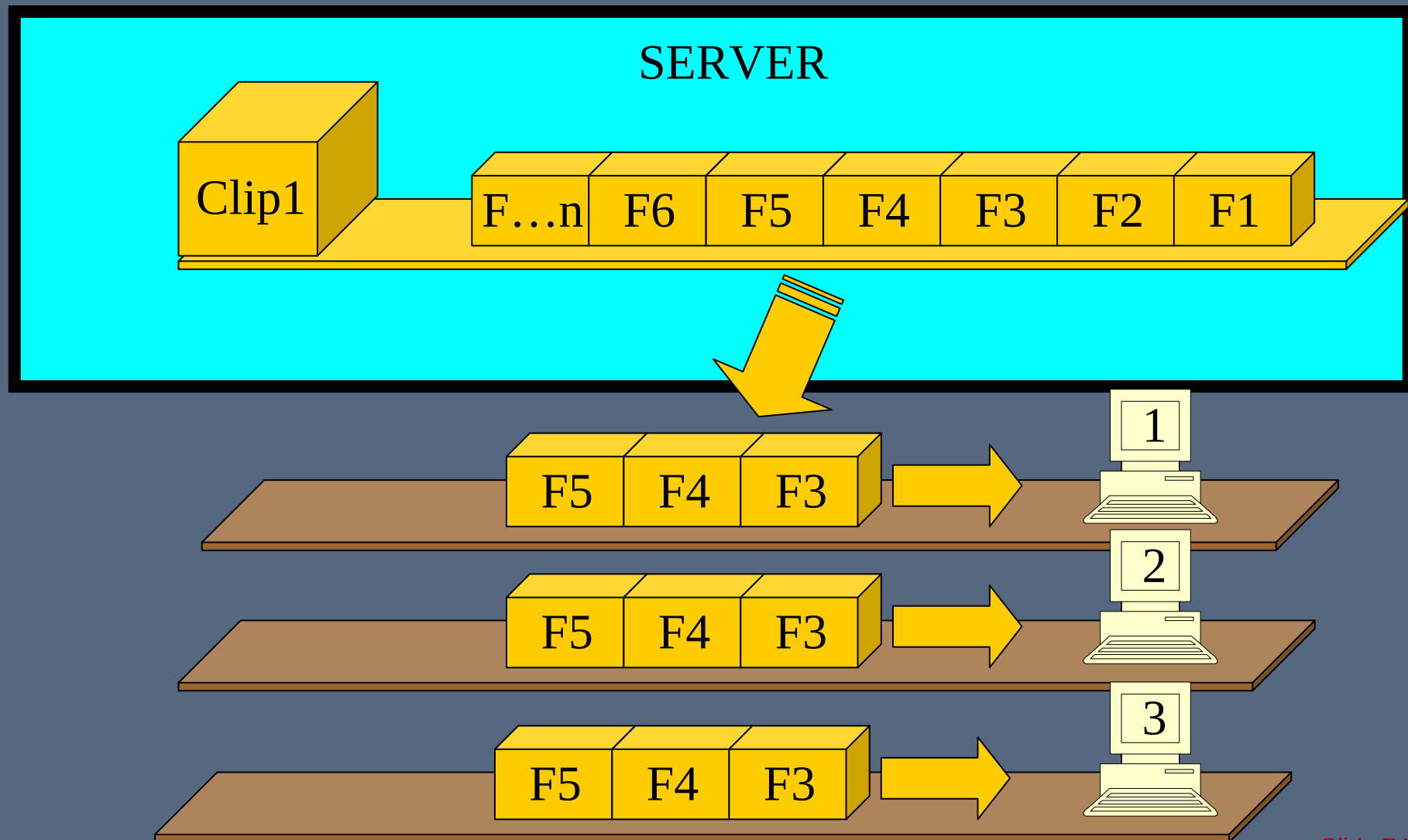
Il Video Server



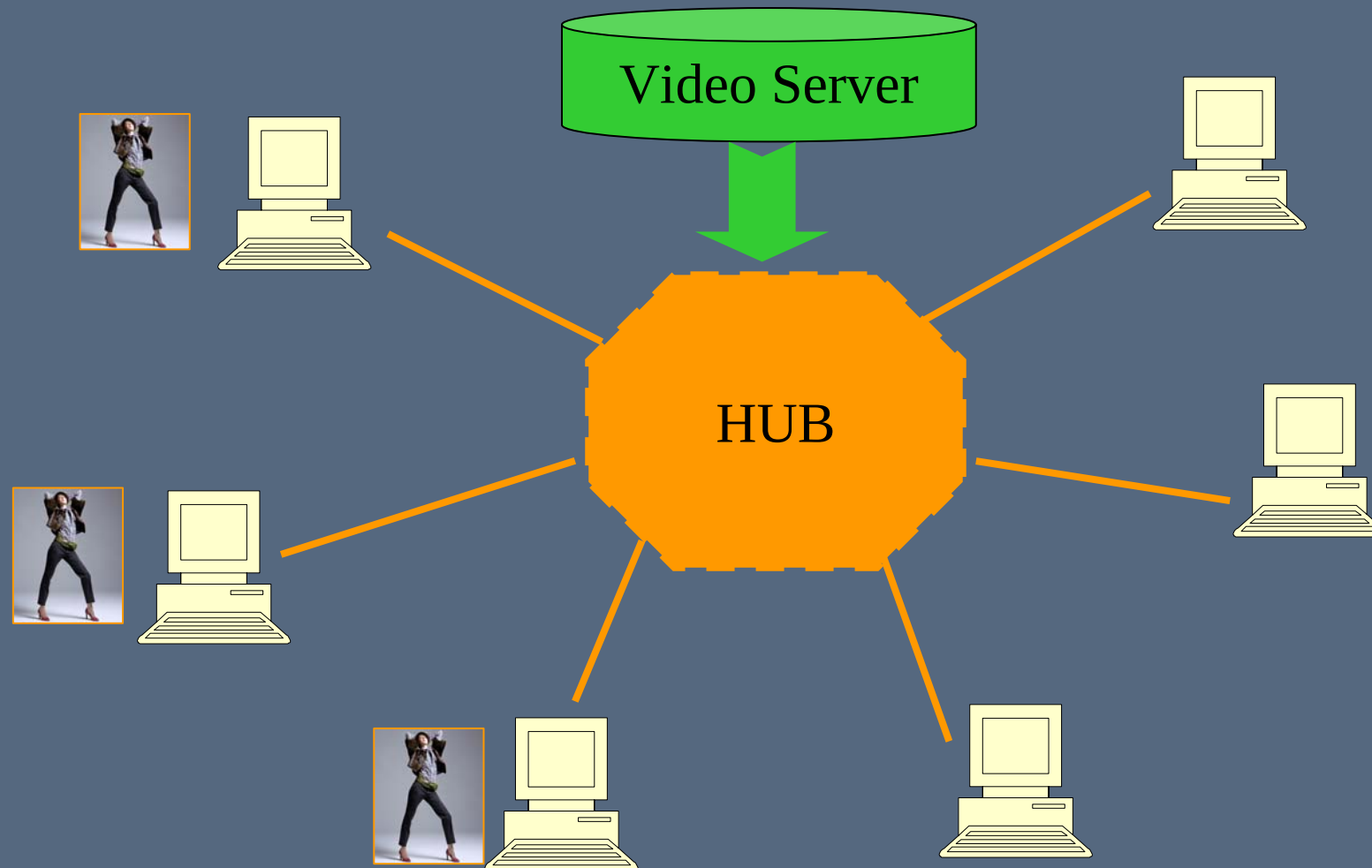
- Utilizza le tecnologie RAID per garantire la ridondanza dei dati registrati.
- Permette di registrare molte ore di materiale Audio/video
- **I/O simultaneo:** Il materiale è subito disponibile anche durante l'aquisizione
- **Multiutenza:** Permette l'accesso simultaneo di più utenti

SONY

II Video Server (I-O Simultaneo)



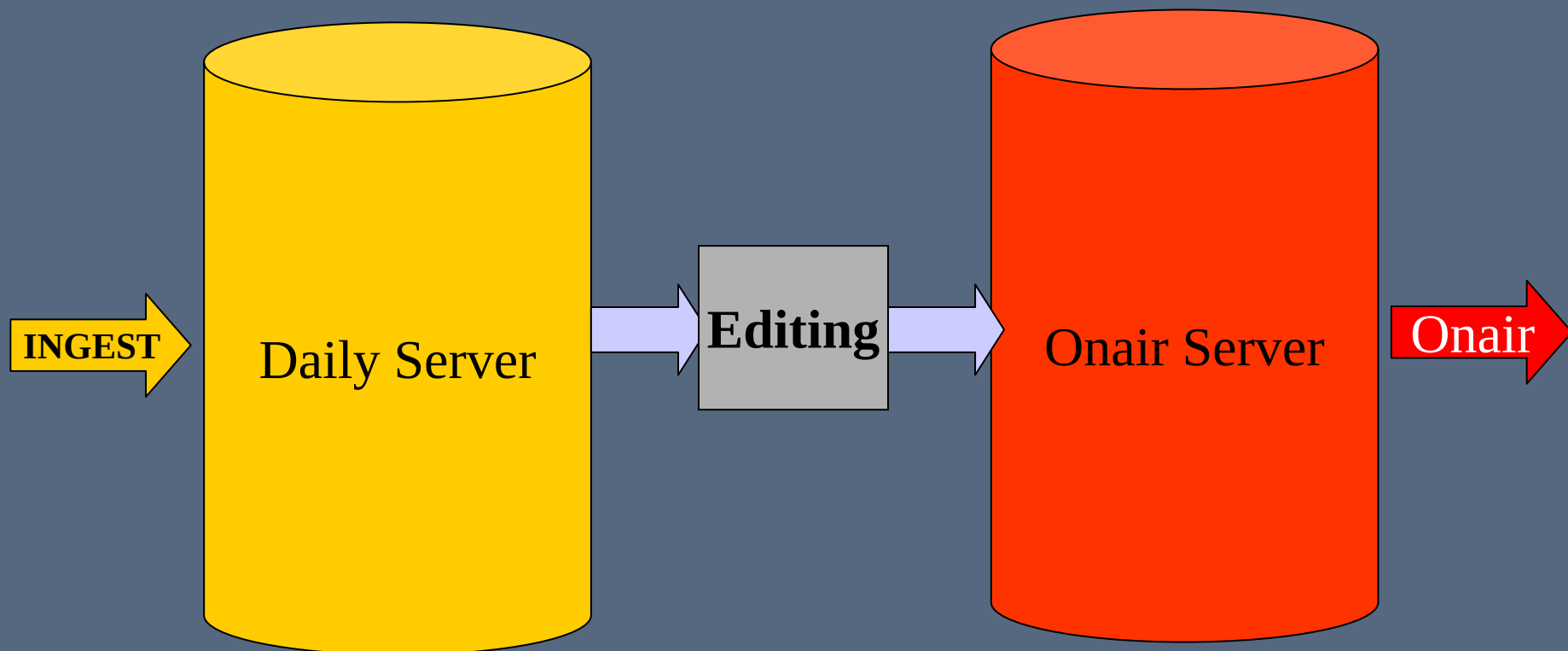
Il Video Server (I-O Simultaneo)



SONY

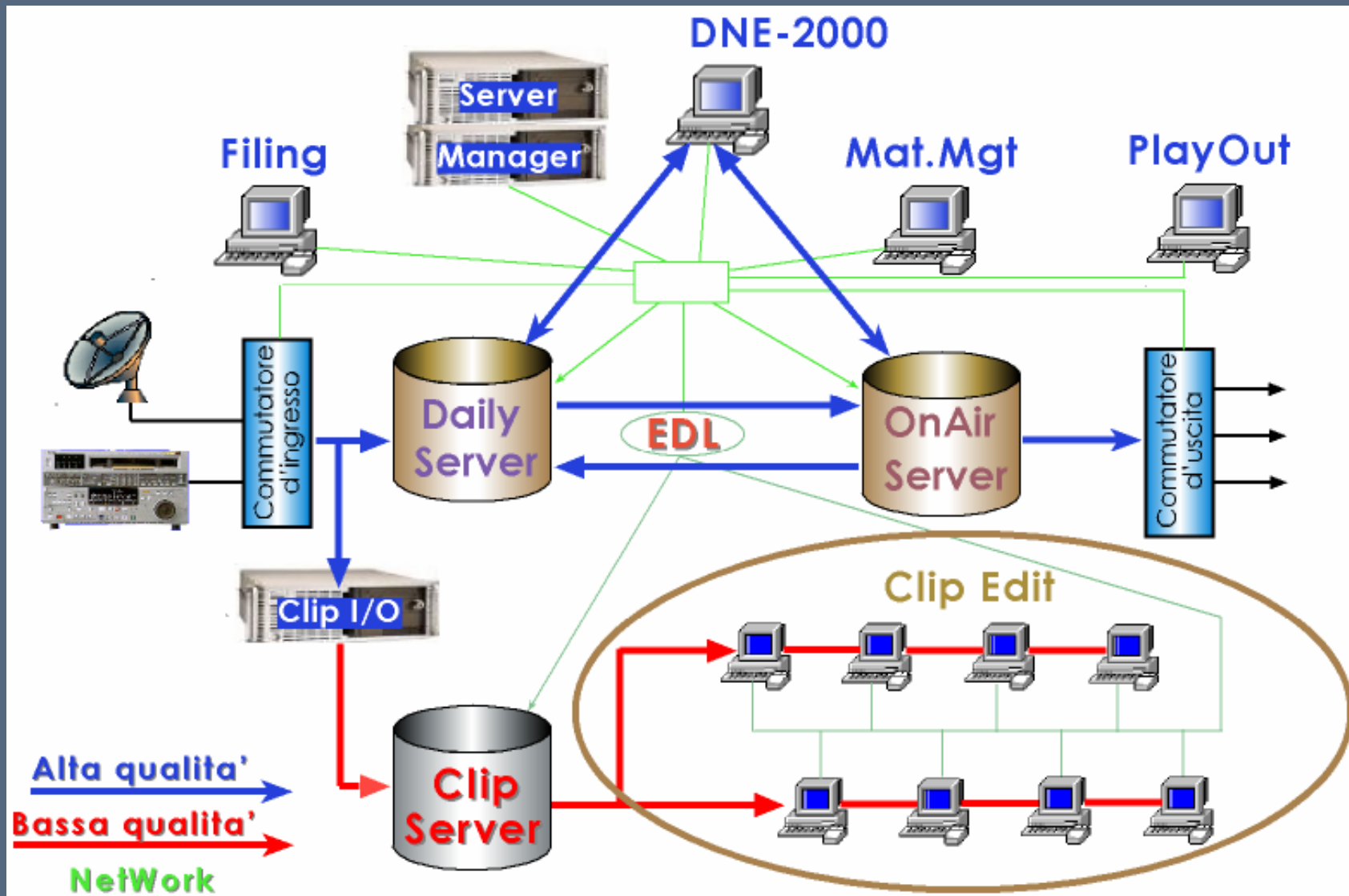
Il Sistema "NewsBase"

Il Concetto base

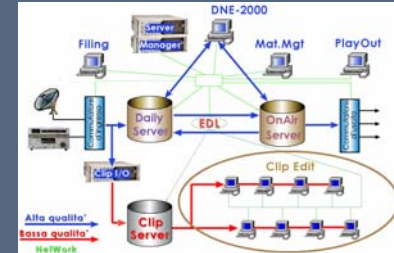


SONY

Il Sistema "NewsBase" Overview



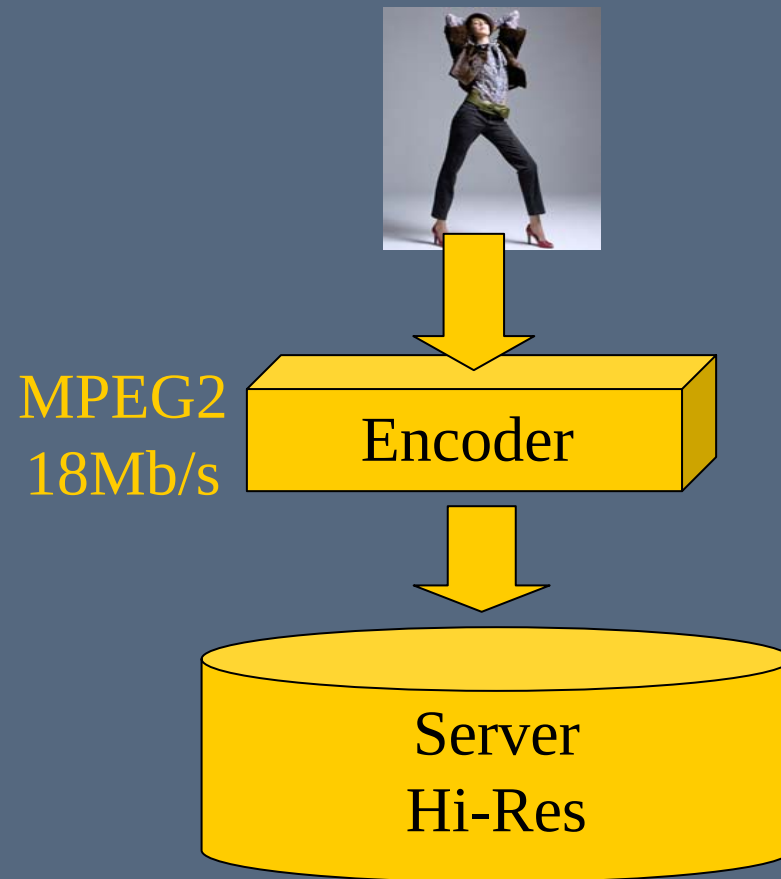
Il Sistema “NewsBase” Caratteristiche Principali



- **Specifiche di sistema**
 - Video Server MAV1000 MPEG-2 18 Mb/s SX
 - DAILY SERVER da 100 ore
 - ONAIR SERVER 50 Ore
 - 22 Porte di IO simultanee di alta Q
 - 12 Porte di IO simultanee di bassa Q
 - 10 sorgenti AV
 - 3 x EDL simultanee
 - 20 postazioni di Journalist Editing
 - 2 postazioni di Editing avanzato
 - 4 postazioni di Playout
 - 5 postazioni di Filing
 - 1 postazione di Material Management

SONY

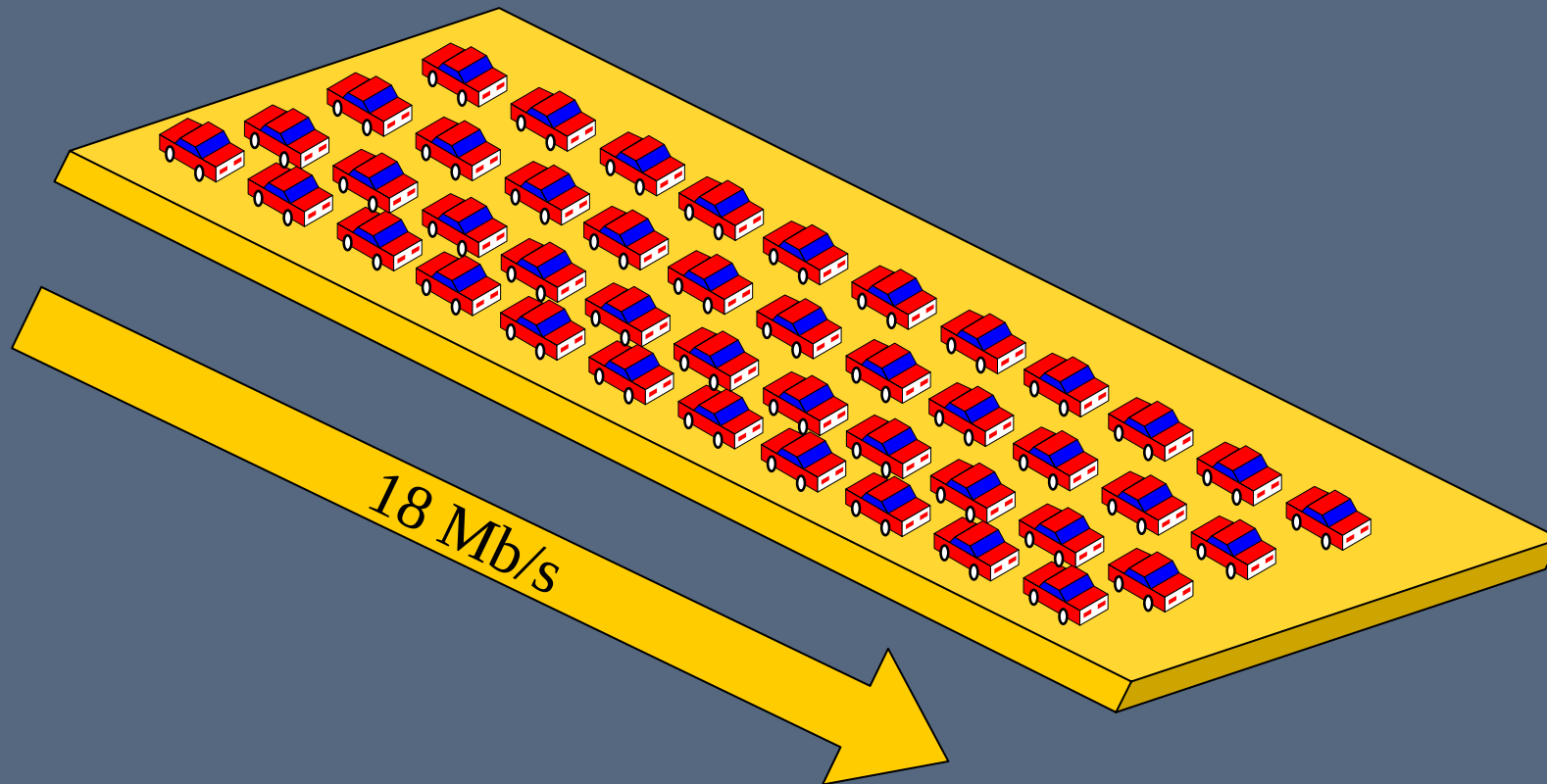
Alta e Bassa Qualità Perché ?



SONY

Alta e Bassa Qualità Perché ?

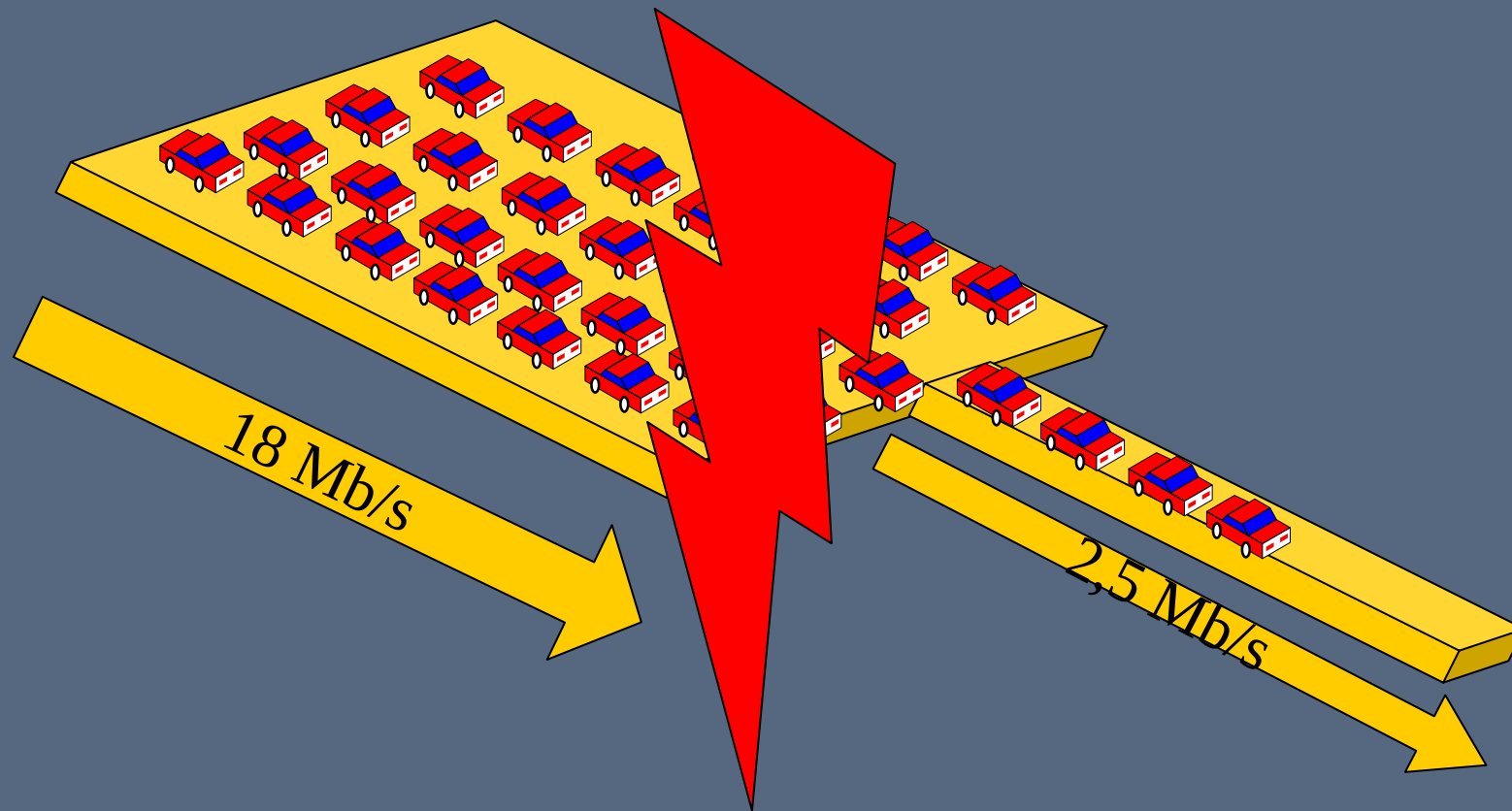
Server
Hi-Res



SONY

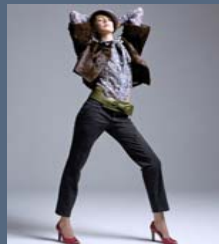
Alta e Bassa Qualità Perché ?

Server
Hi-Res



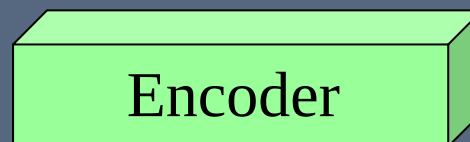
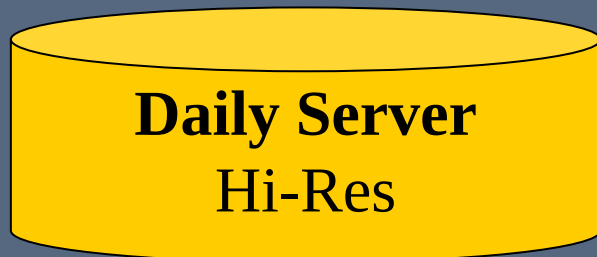
SONY

Alta e Bassa Qualità Perché ?



MPEG2
18Mb/s

Encoder



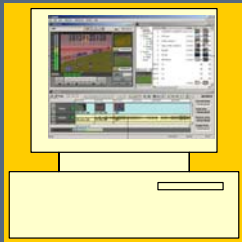
M-JPEG
2.5Mb/s



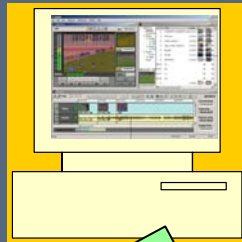
SONY

Alta e Bassa Qualità Perché ?

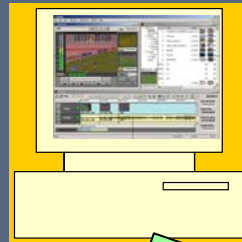
Editor 1



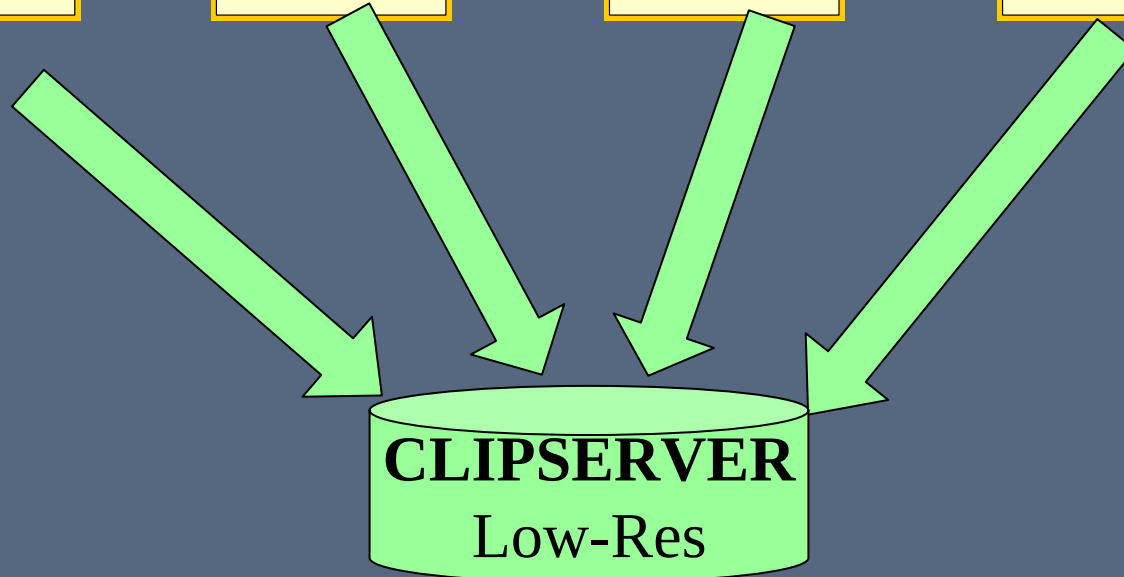
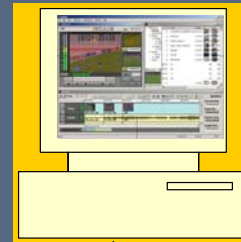
Editor 2



Editor 3



Editor ...50



CLIPSERVER

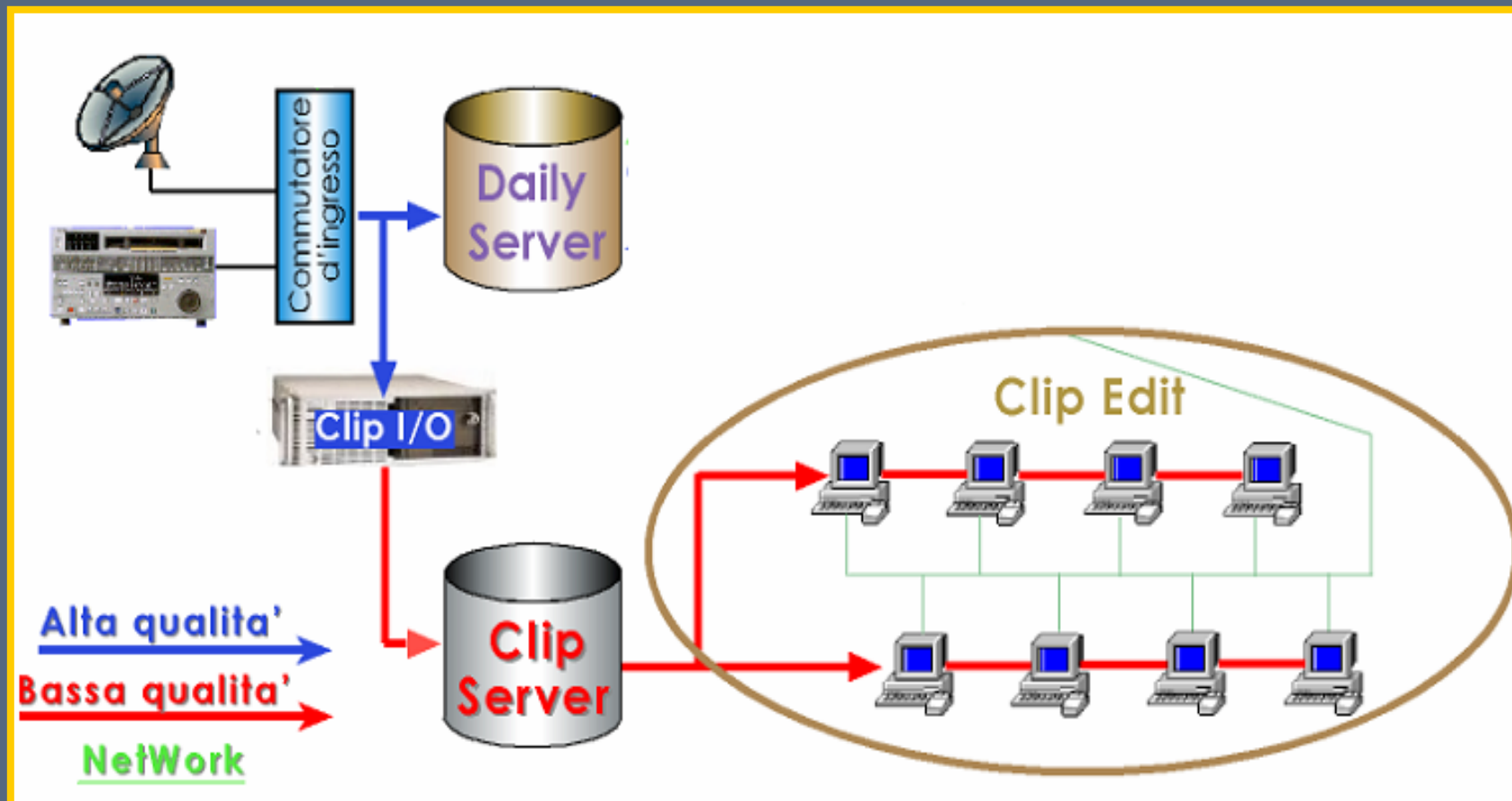
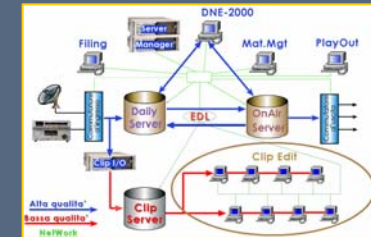
Low-Res

M-JPEG

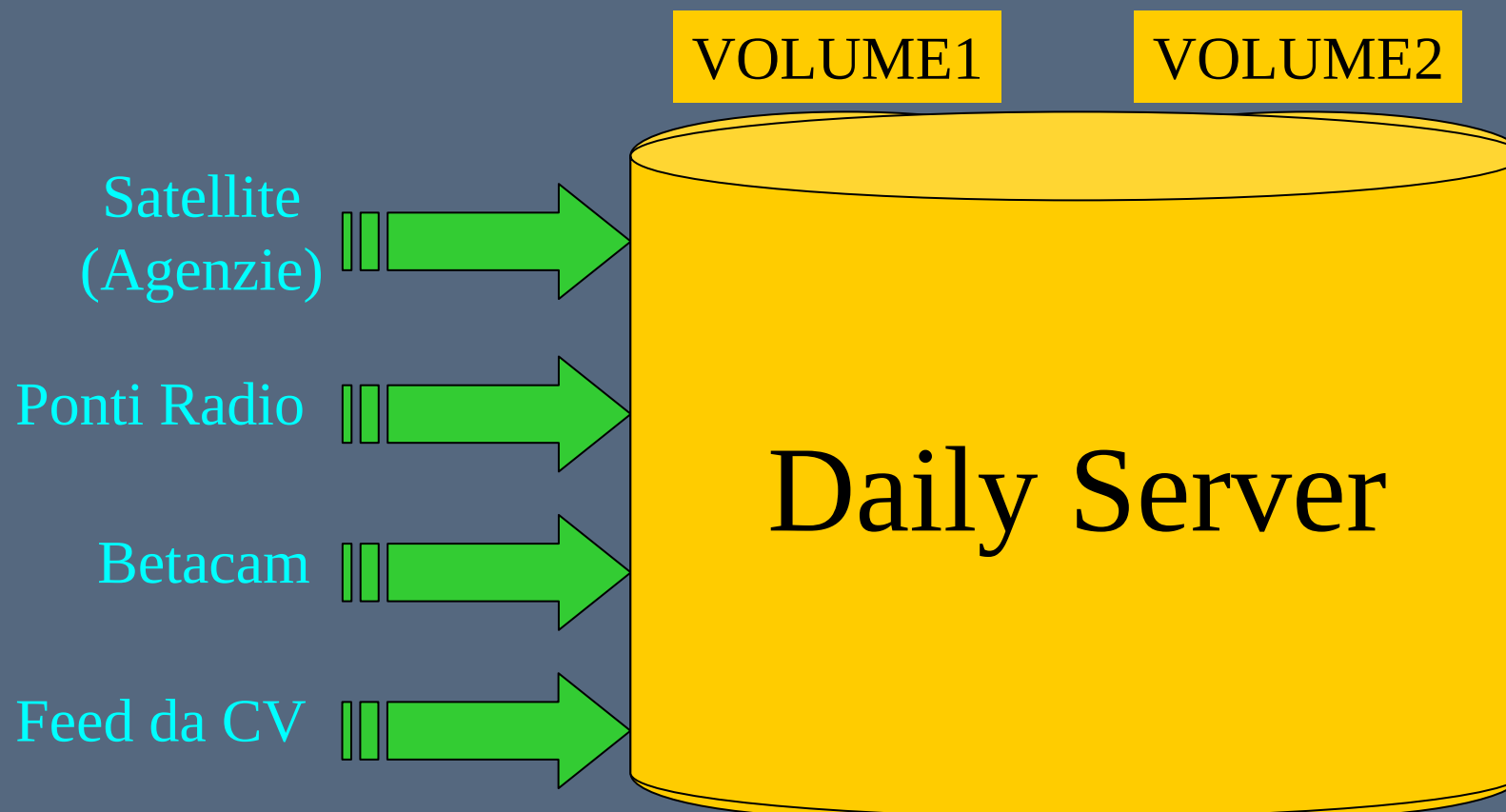
2.5Mb/s

SONY

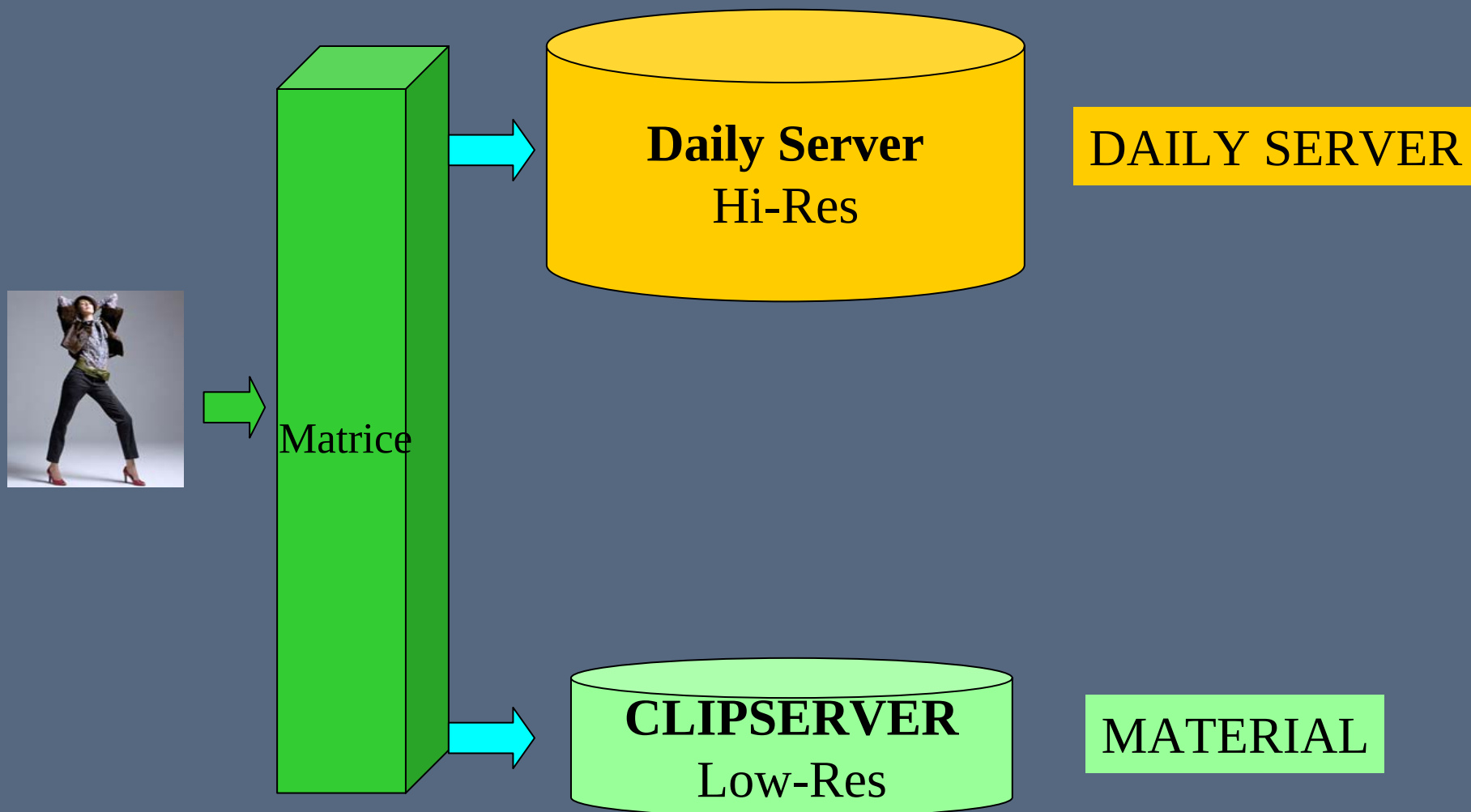
Alta e Bassa Qualità Perché ?



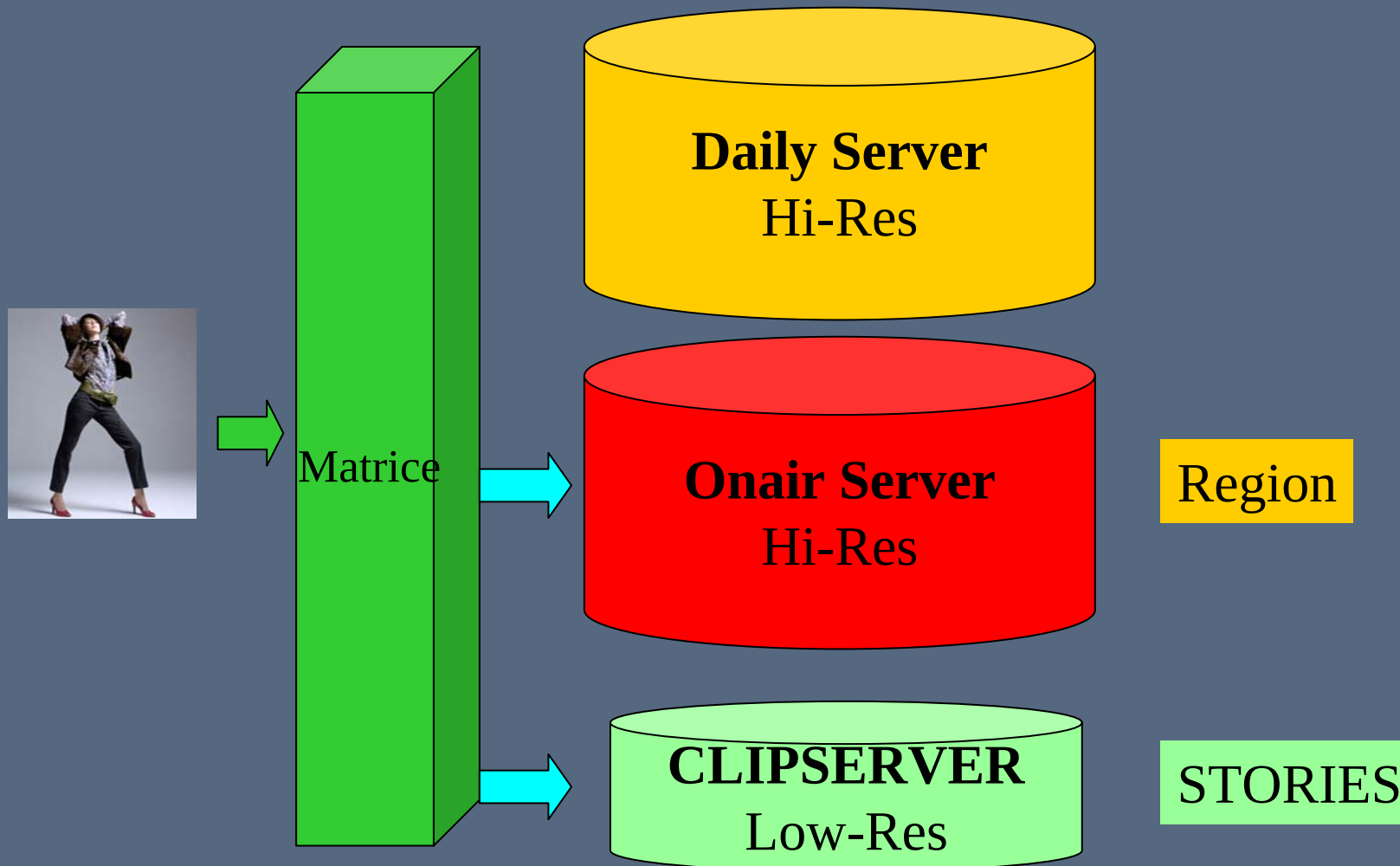
La Registrazione



La Registrazione

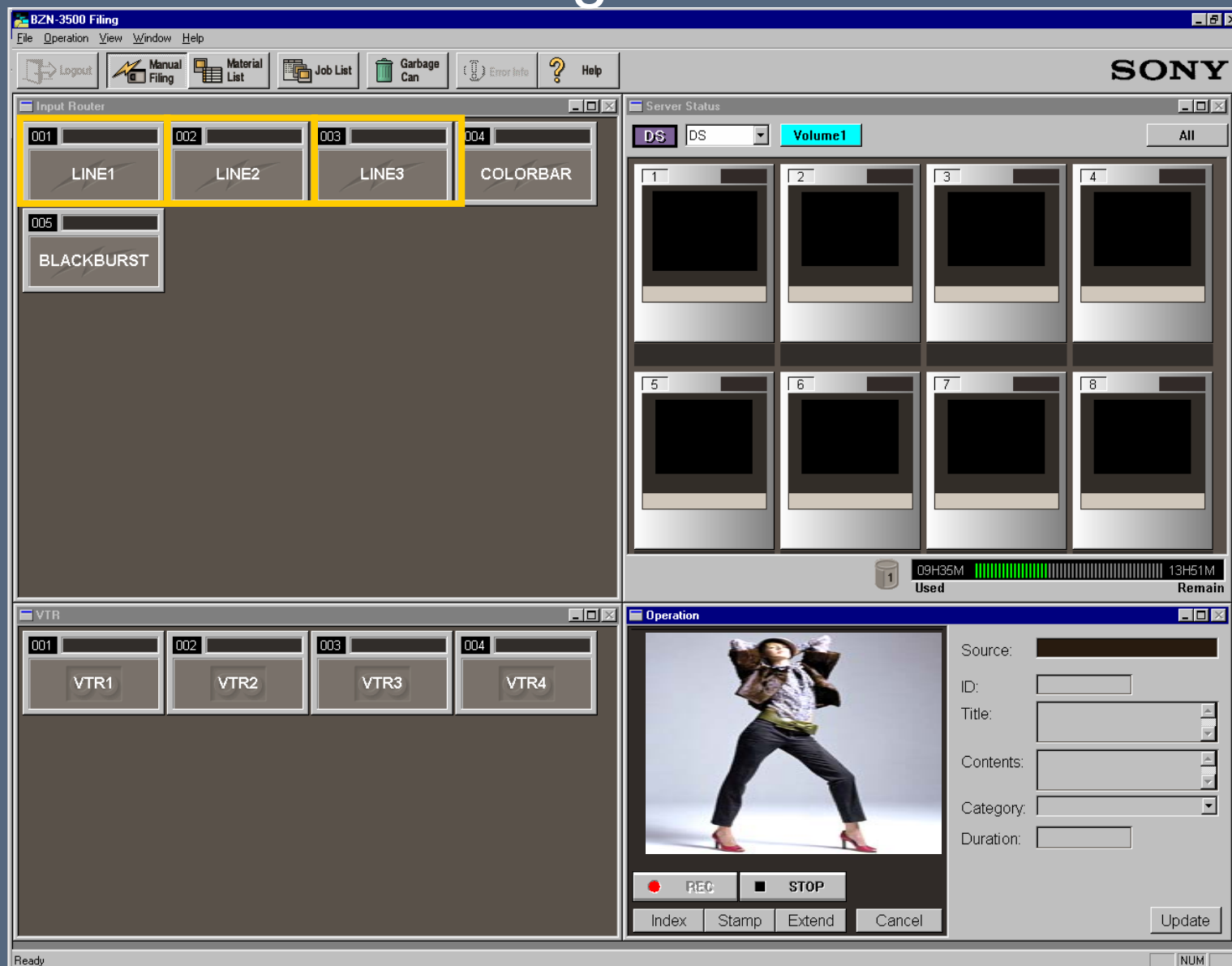


La Registrazione

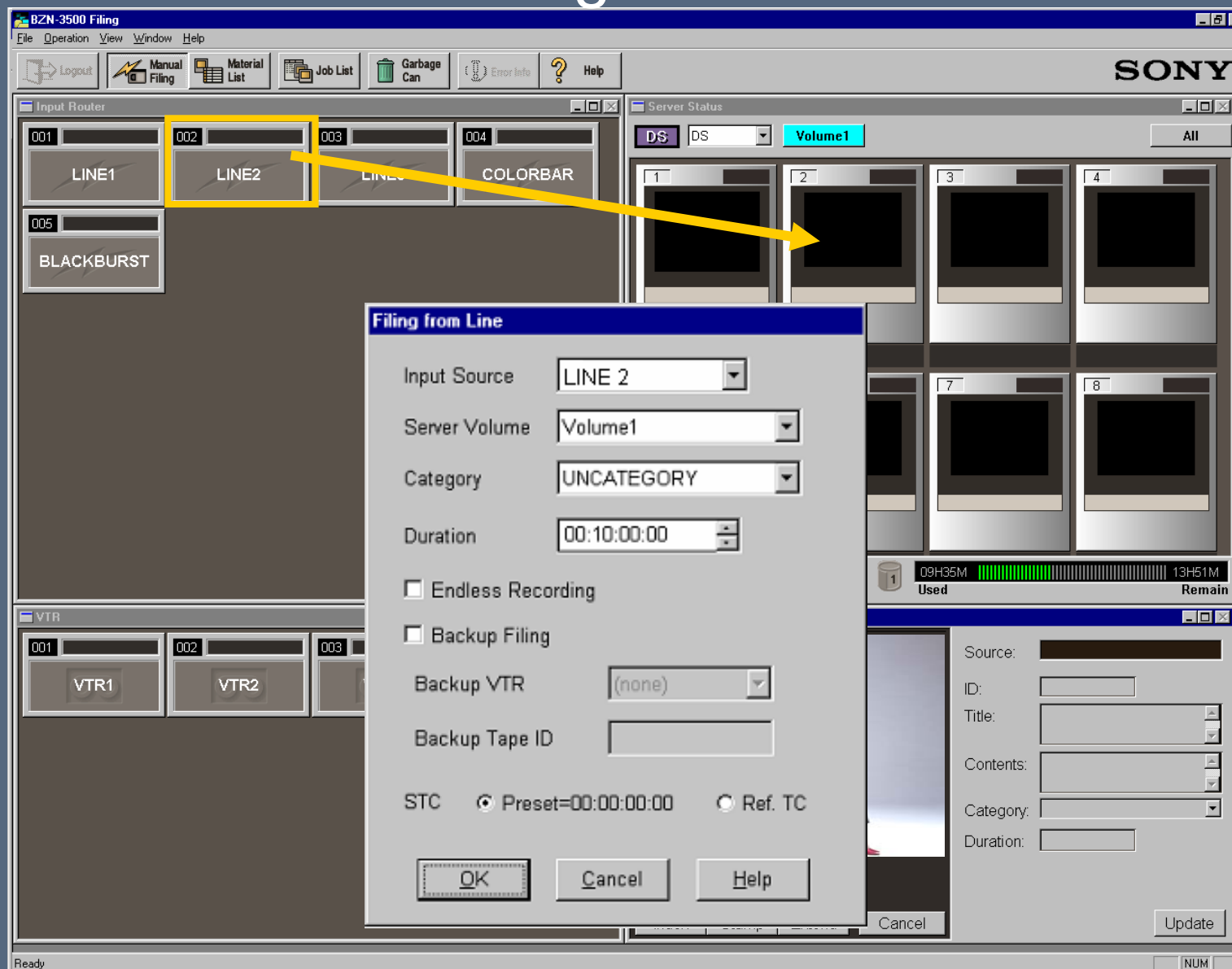


SONY

La Registrazione



La Registrazione



SONY

La Registrazione

BZN-3500 Filing

File Edit Operation View Tool Window Help

Logout Manual Filing Material List Job List Garbage Can Error Info Help

Daily Server

DS

Clip	ID	Ve...	Title	Duration	Status
	AD0001F3	0	INVIO DA USA ..	00:01:46:18	N
	AD000200	1	BALENE in esc..	00:01:00:12	Y
	AD000288	0	GIRATO BIRI M..	00:01:00:14	N
	AD00028A	0	MUCCHE PEZZAT..	00:01:00:00	N
	AD0002BF	0	ELISA	00:01:00:00	N
	AD000299	0	ELISA	00:00:37:05	N
	AD00029A	0	MUSIC	00:00:24:18	N
	AD0002AC	0	MALTEMPO A MI..	00:01:55:05	N
	AD0002DA	0	Beta Elisa	00:02:27:15	N
	AD0002DF	0		00:00:50:18	N
	AD0002E0	0		00:00:19:11	N
	AD000383	0	lk [kk	00:00:09:17	N
	AD0004E9	0	prova ale	00:00:11:00	N

Agenzie
Girati
Videoteca
Audio
Spezzoni
Regionali
Grafiche
Preziose
esteri
CANCELLA...
UNCATEGO...

Server Status

DS DS Volume1 All

1 2 3 4

5 6 7 8

Used 05H13M 18H13M Remain

Operation

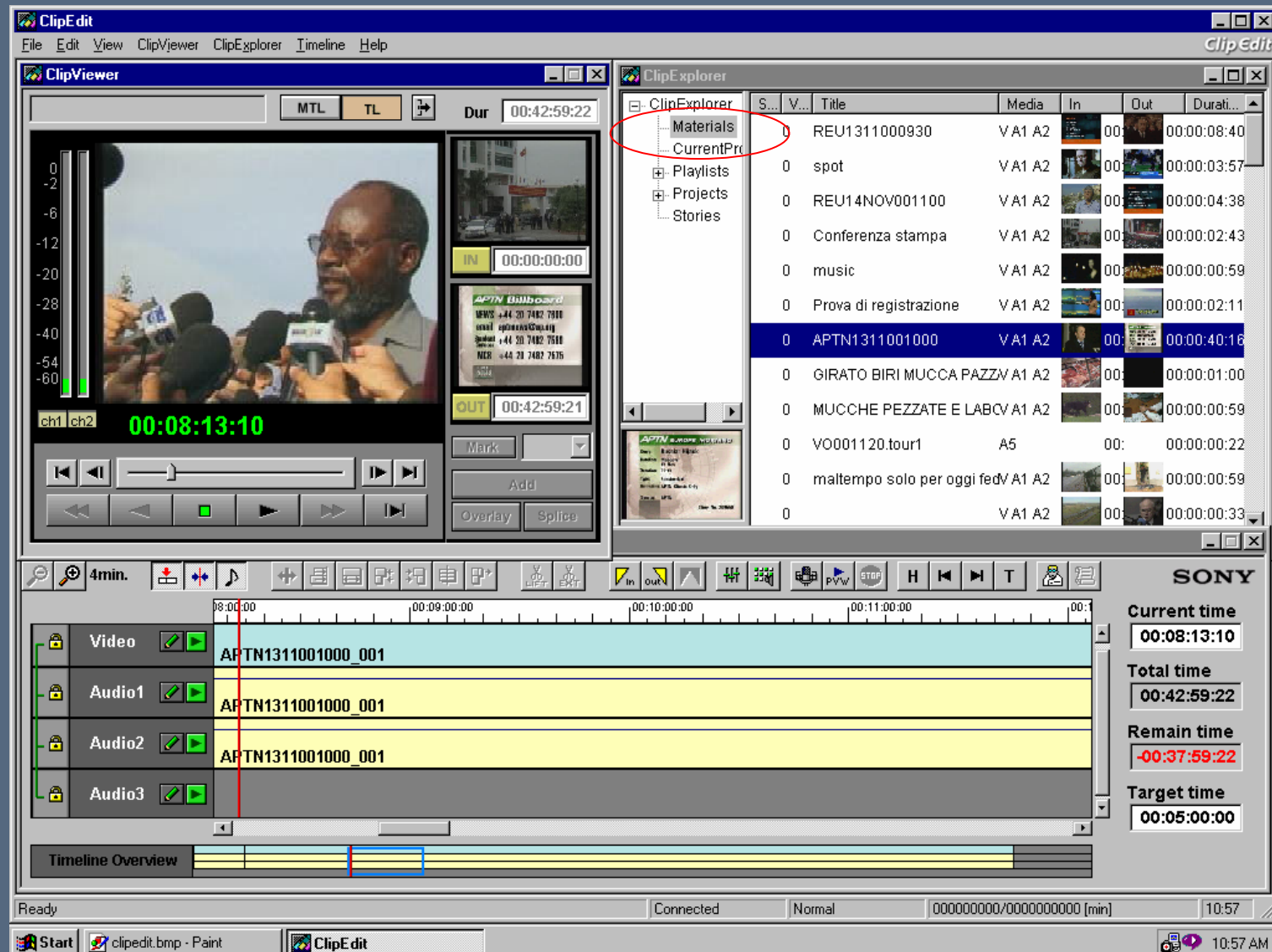
Source:
ID:
Title:
Contents:
Category:
Duration:

REC STOP 00:00:00 REC STBY

Index Stamp Extend Cancel Update

Ready

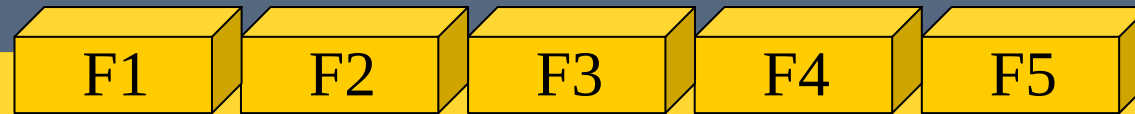
La Registrazione



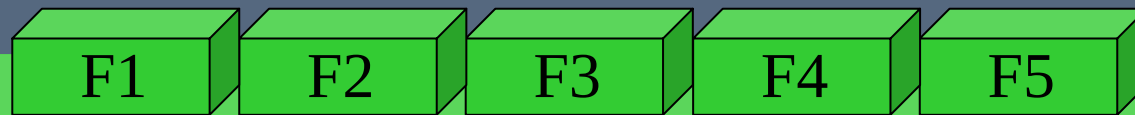
SONY

Workflow (EDL)

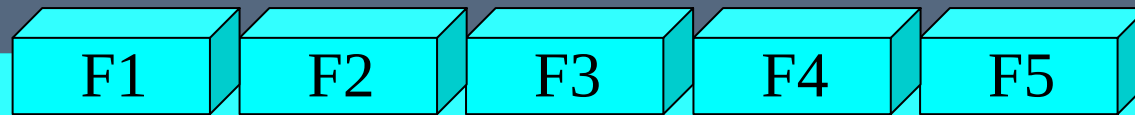
Video A



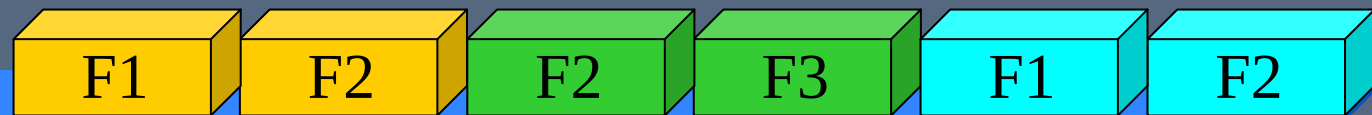
Video B



Video C

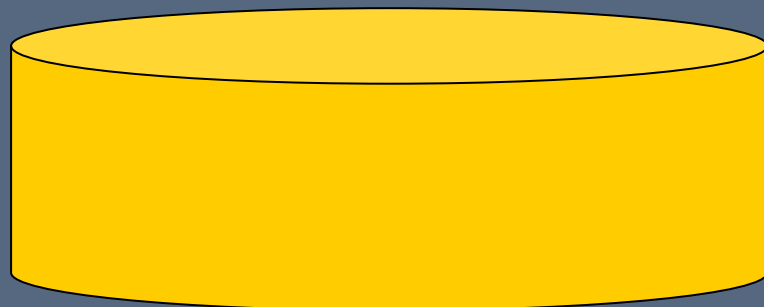
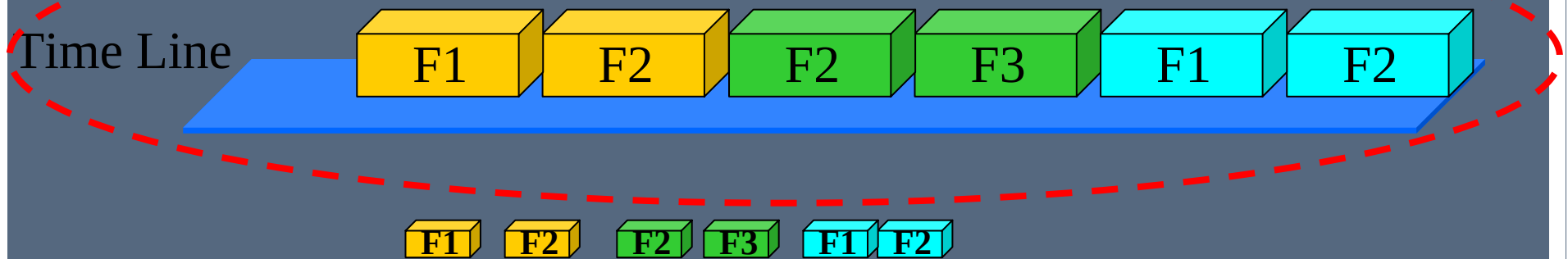


Time Line

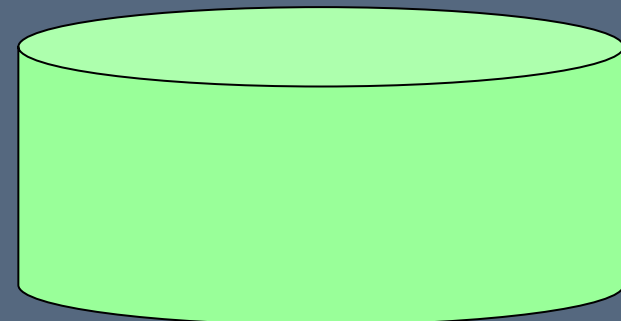


SONY

Workflow (EDL)



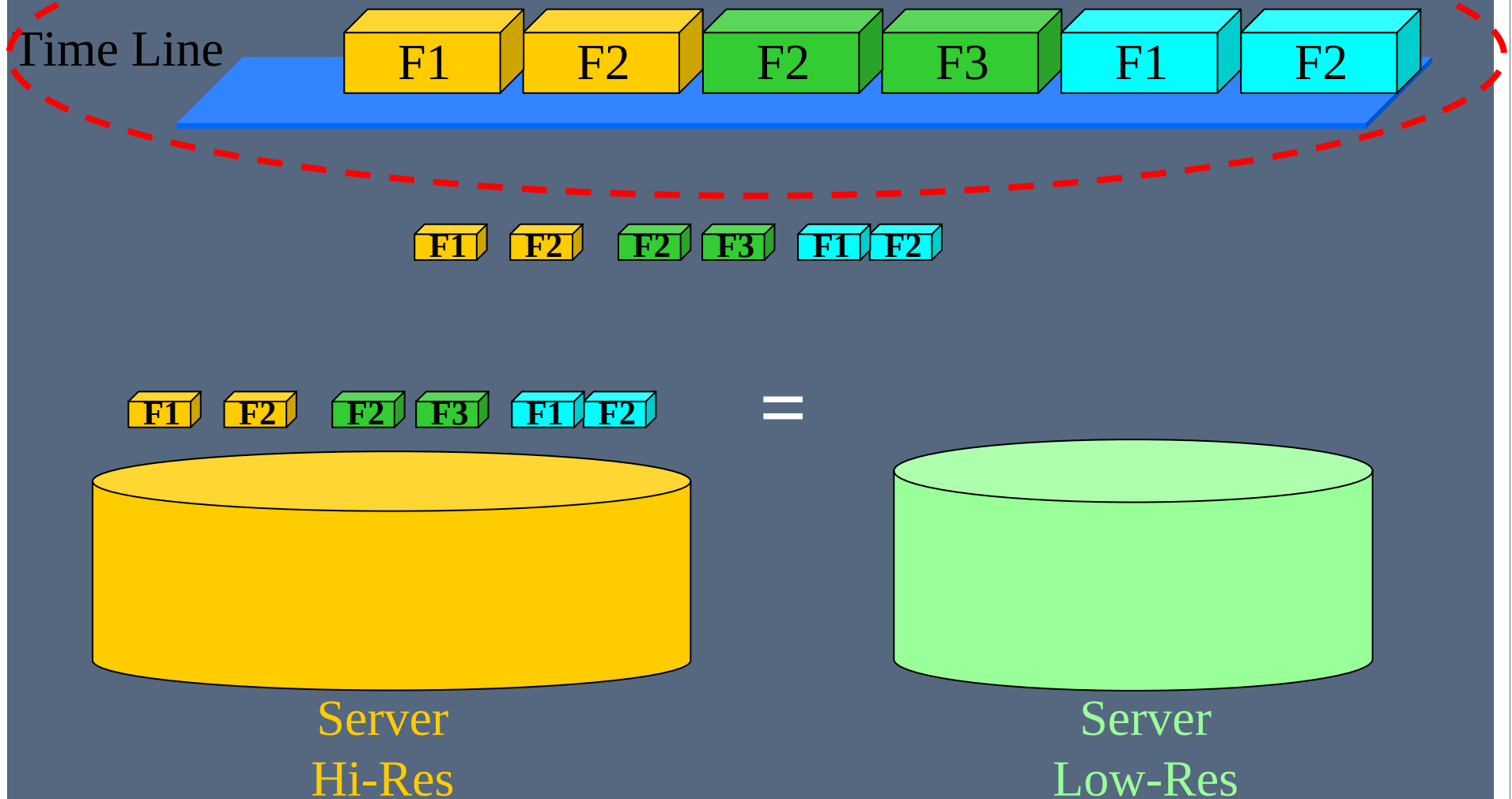
Server
Hi-Res



Server
Low-Res

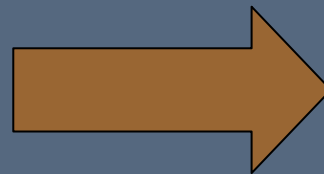
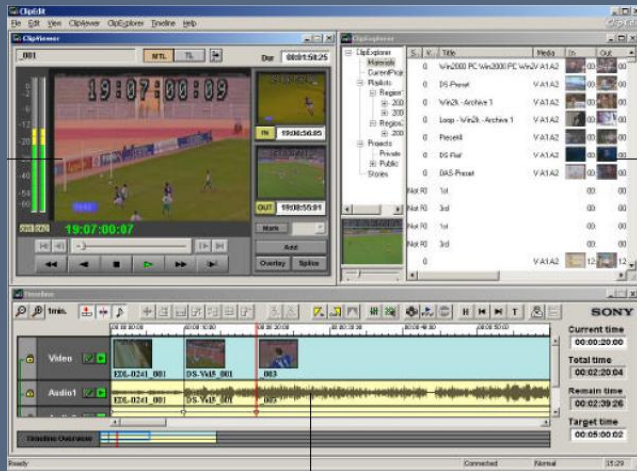
SONY

Workflow (EDL)



SONY

Workflow (EDL)

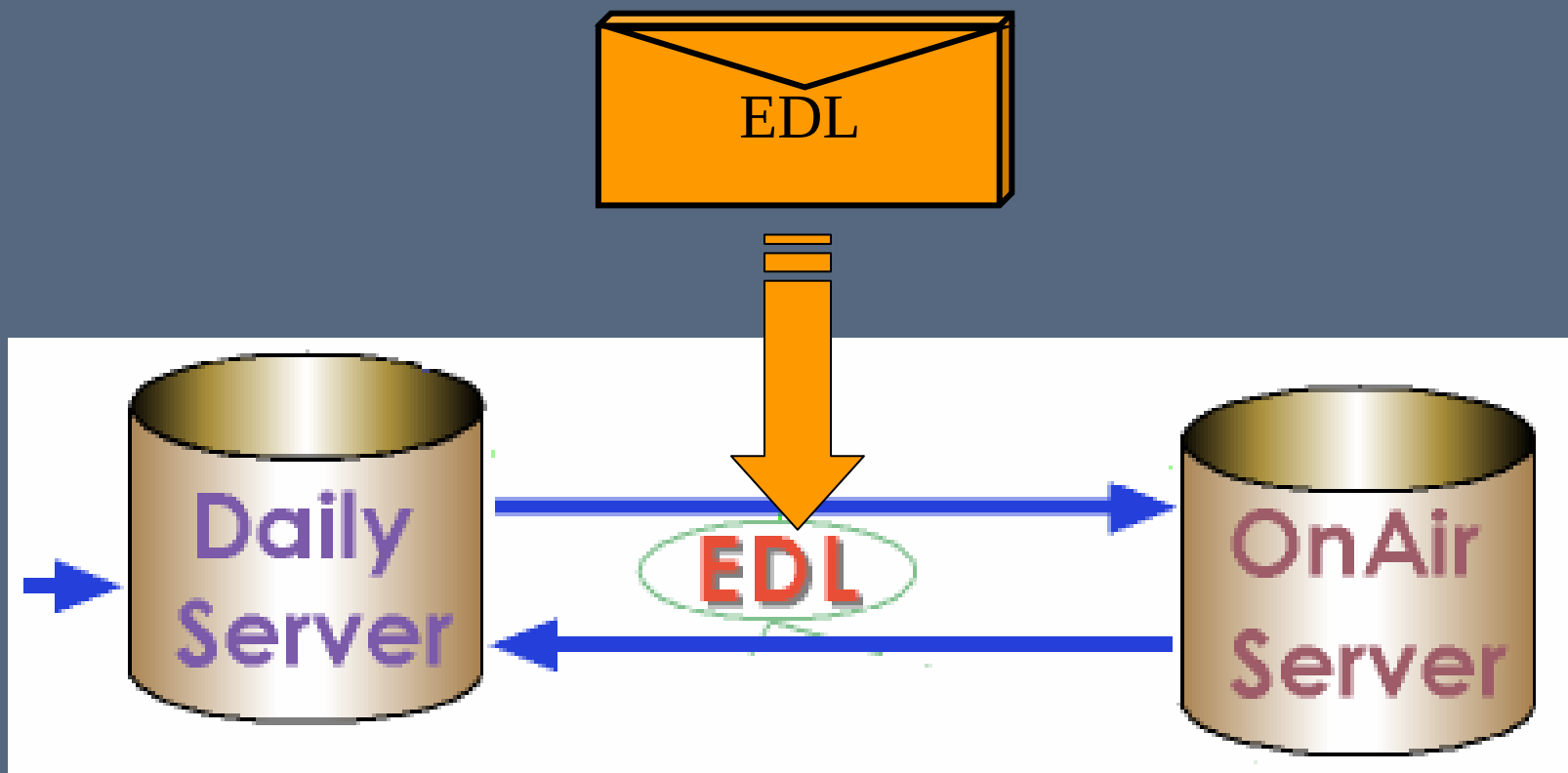


***** VideoA *****
IN = 01.00.00 OUT = 01.00.10
***** VideoB *****
IN = 03.30.01 OUT = 03.30.10
***** VideoC *****
IN = 01.00.00 OUT = 01.00.10

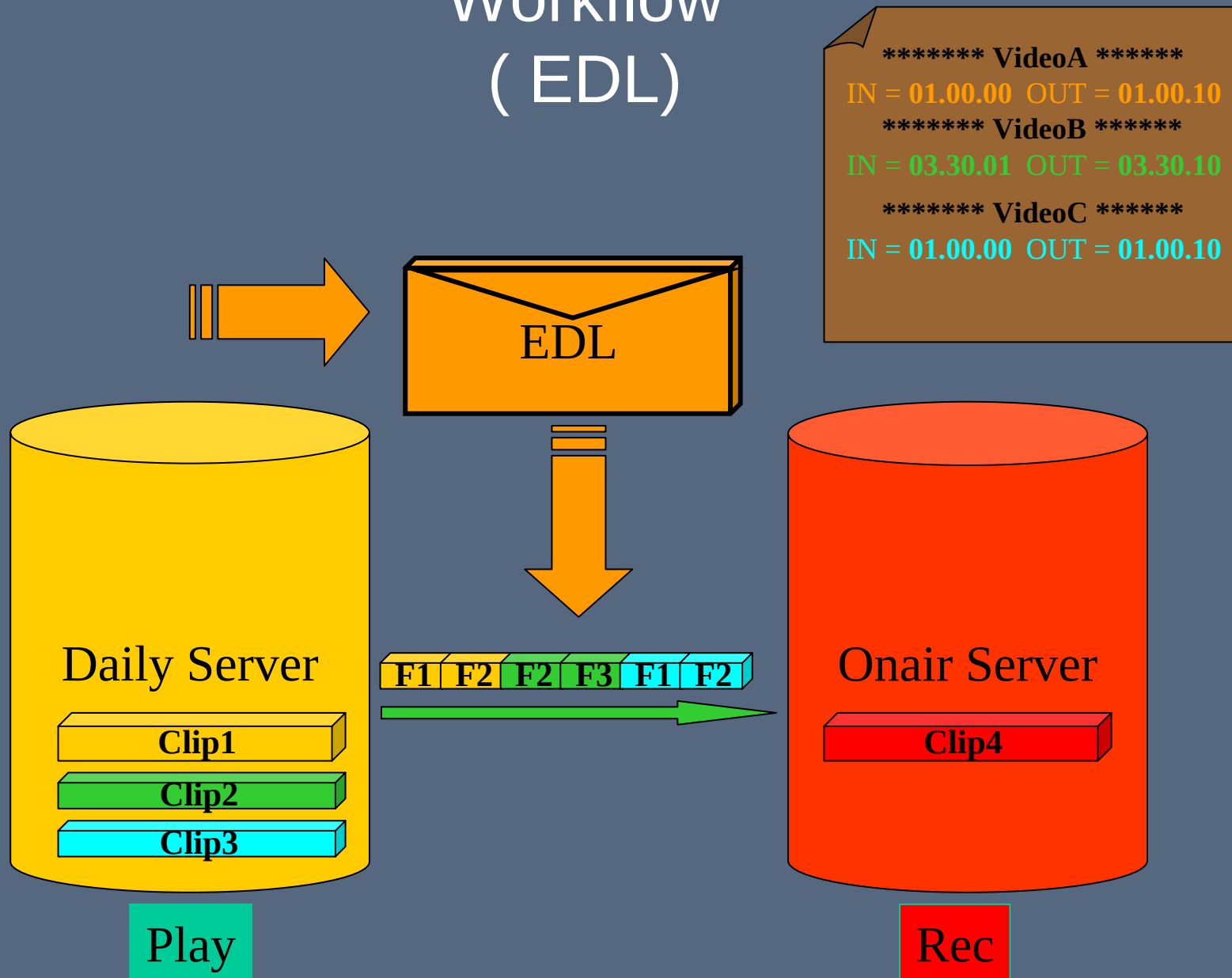


SONY

Workflow (EDL)

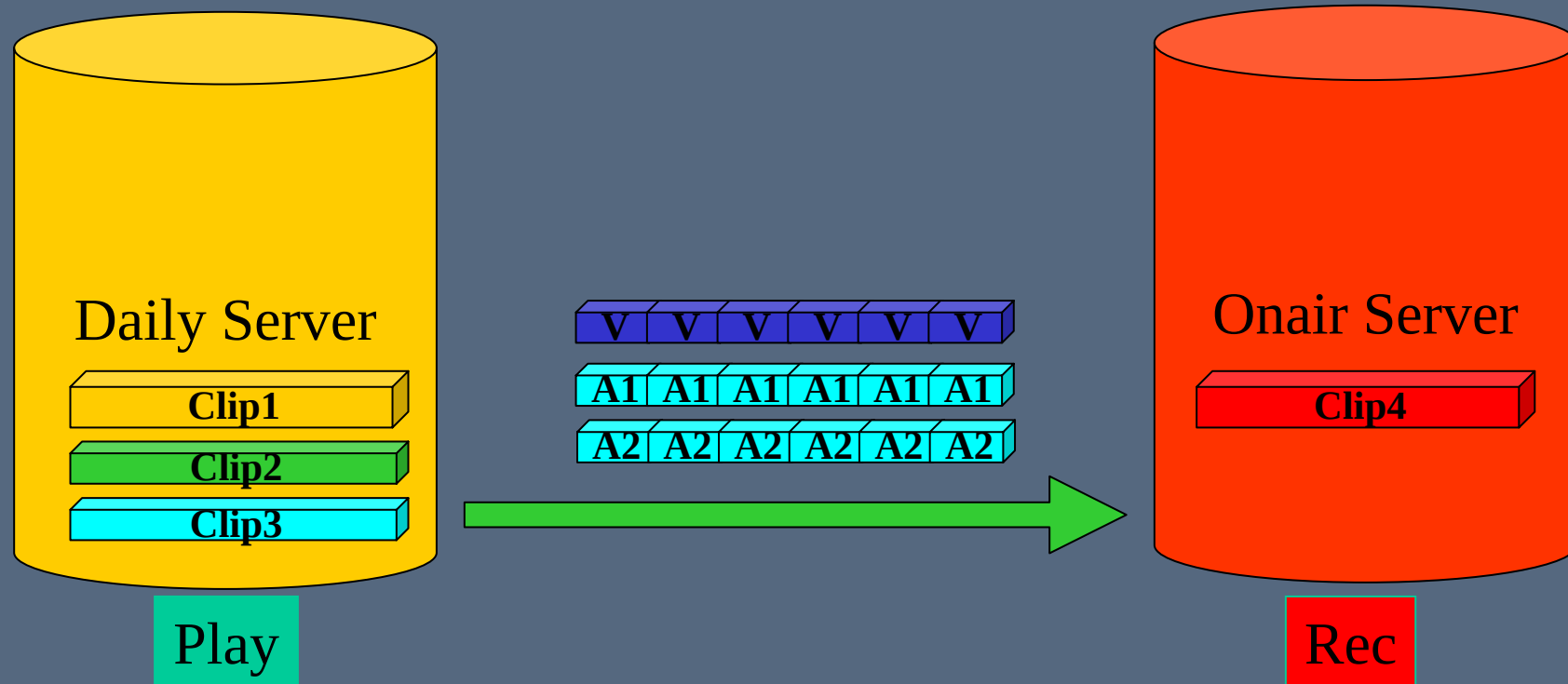


Workflow (EDL)



SONY

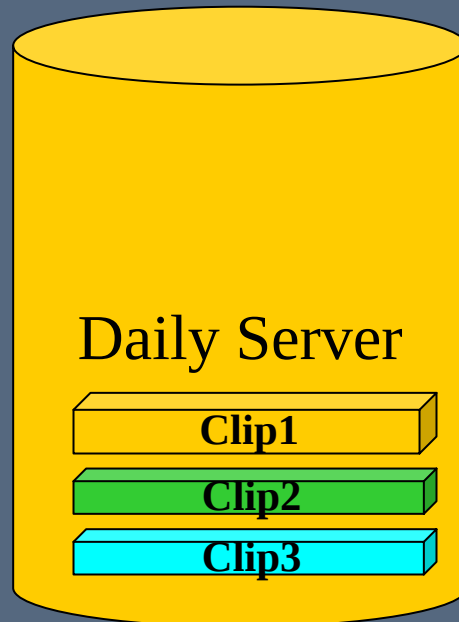
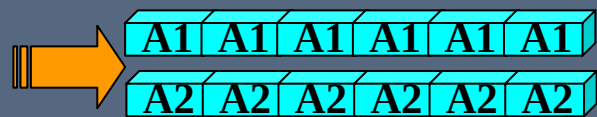
EDL I canali Audio



SONY

EDL I canali Audio

Da Clipedit



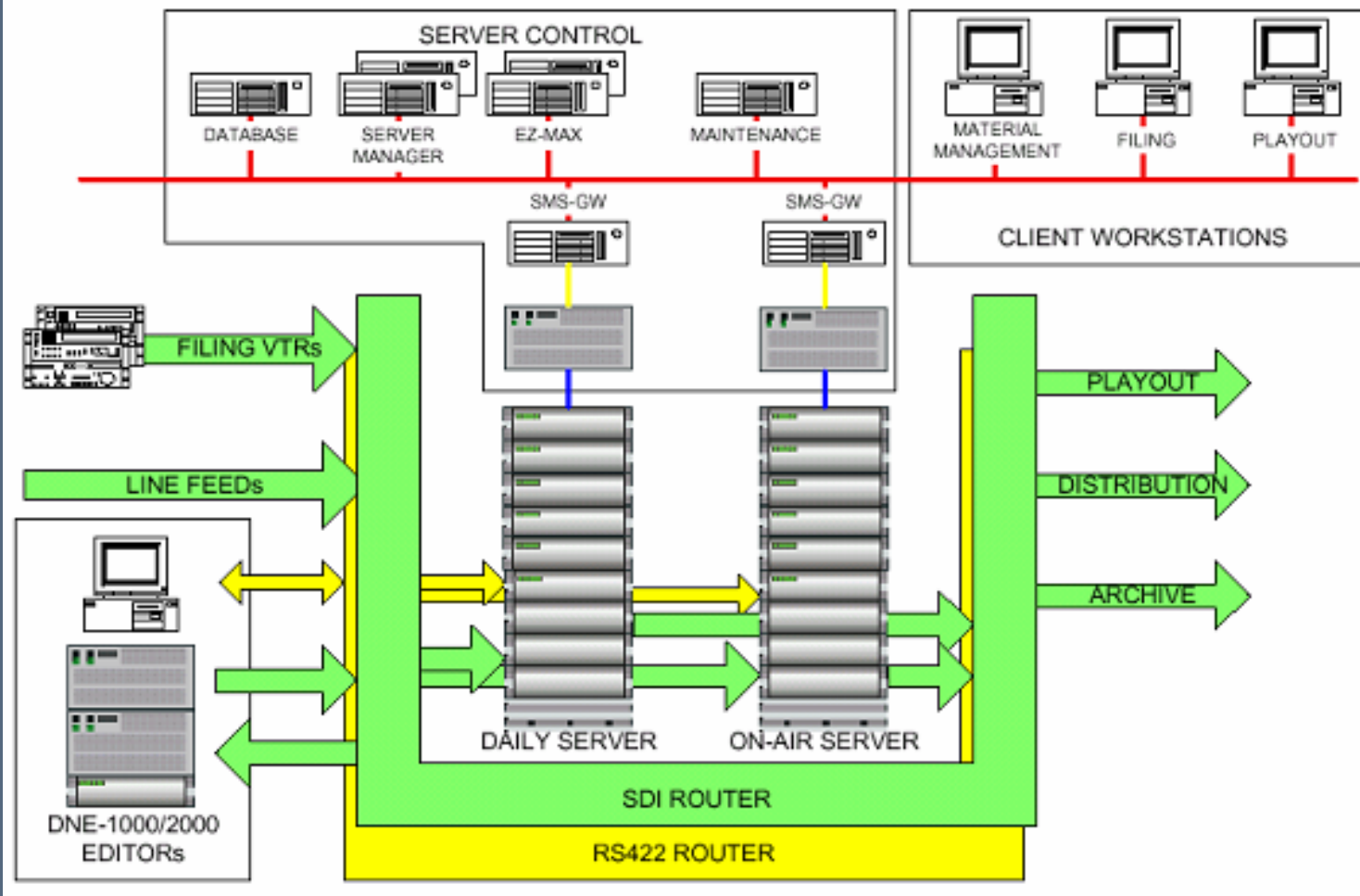
Play



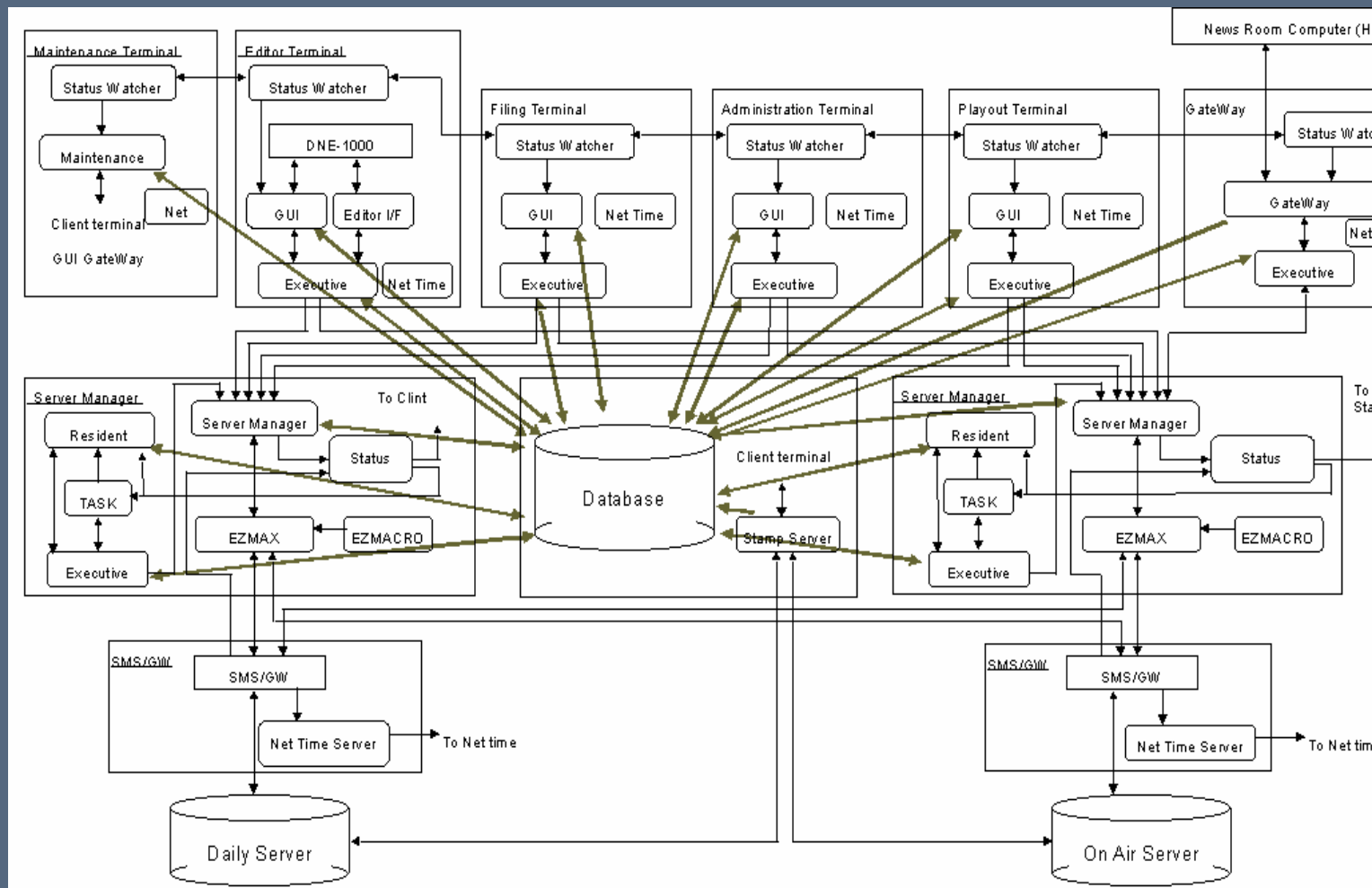
Rec

Dietro le quinte 1/2

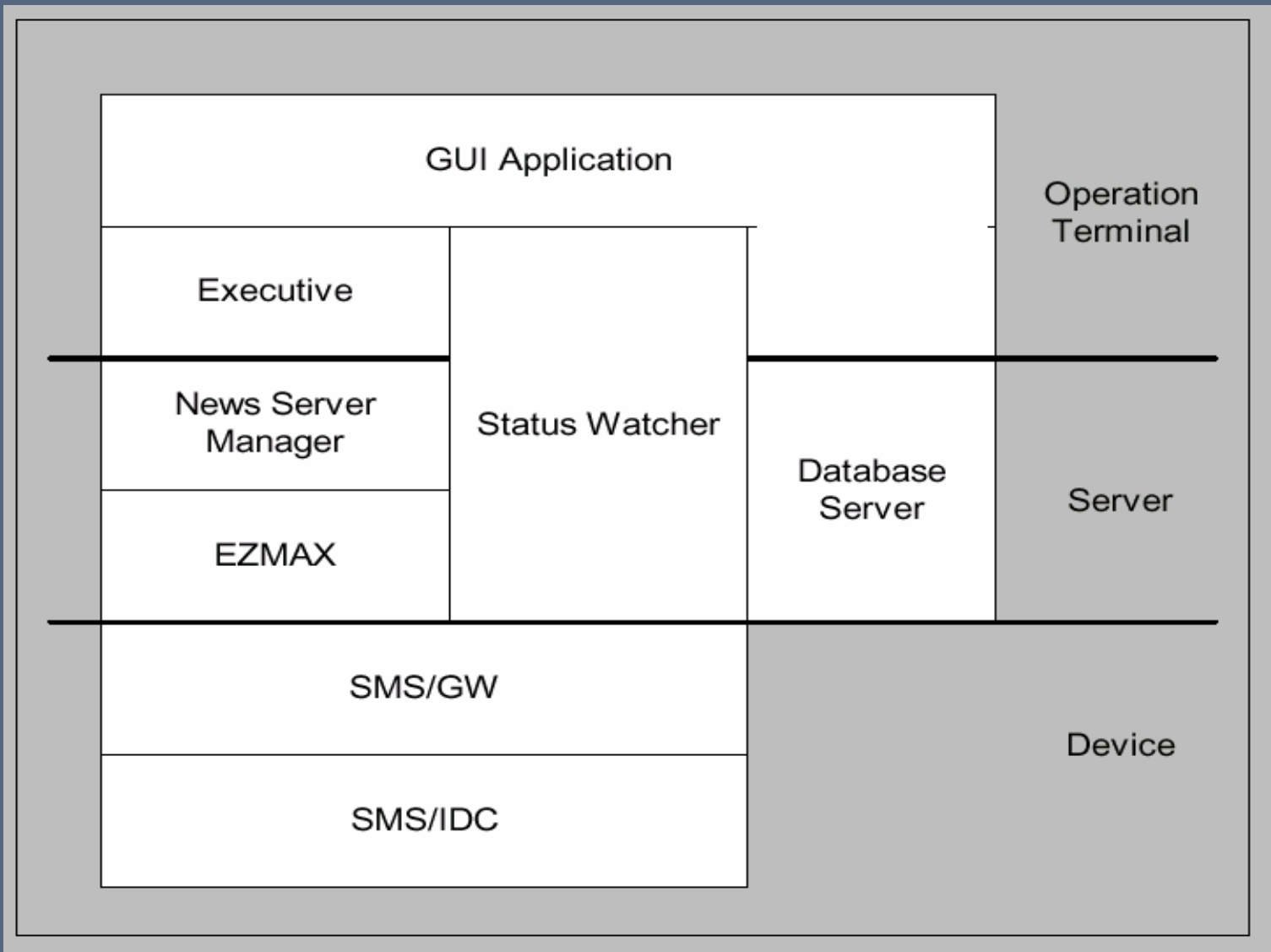
Sony News System Clipserver Training



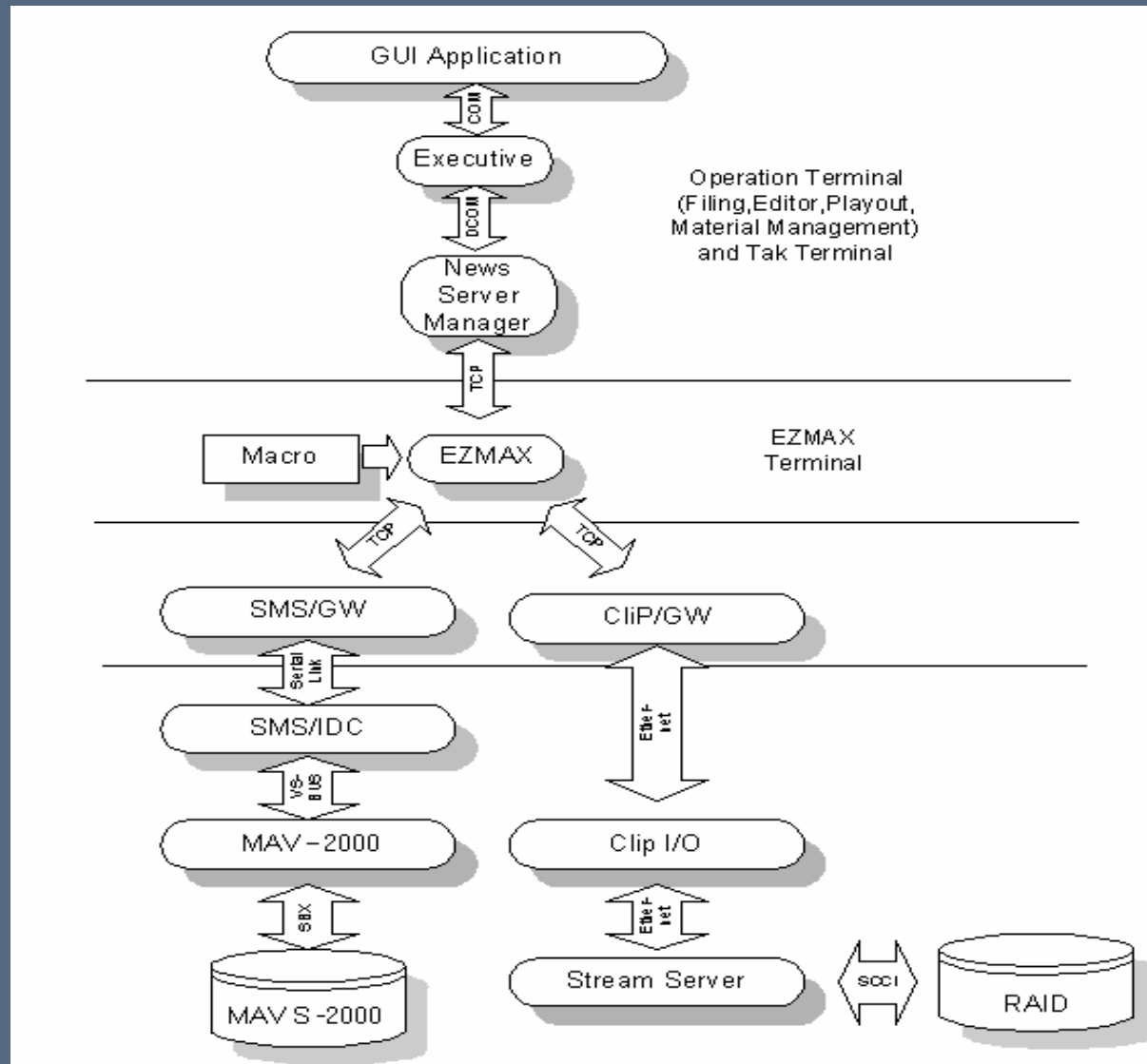
Dietro le quinte 2/2

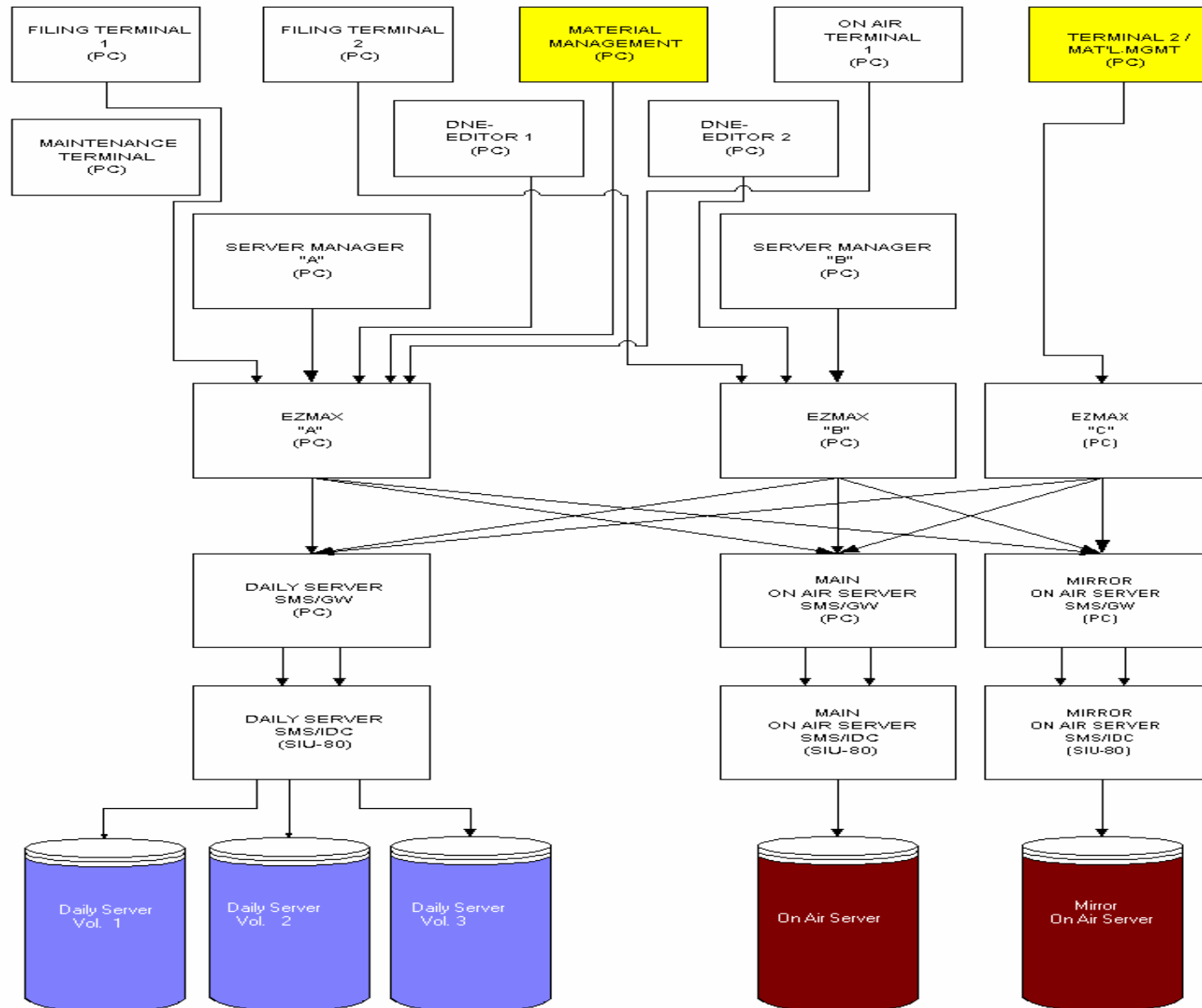


Software Layers

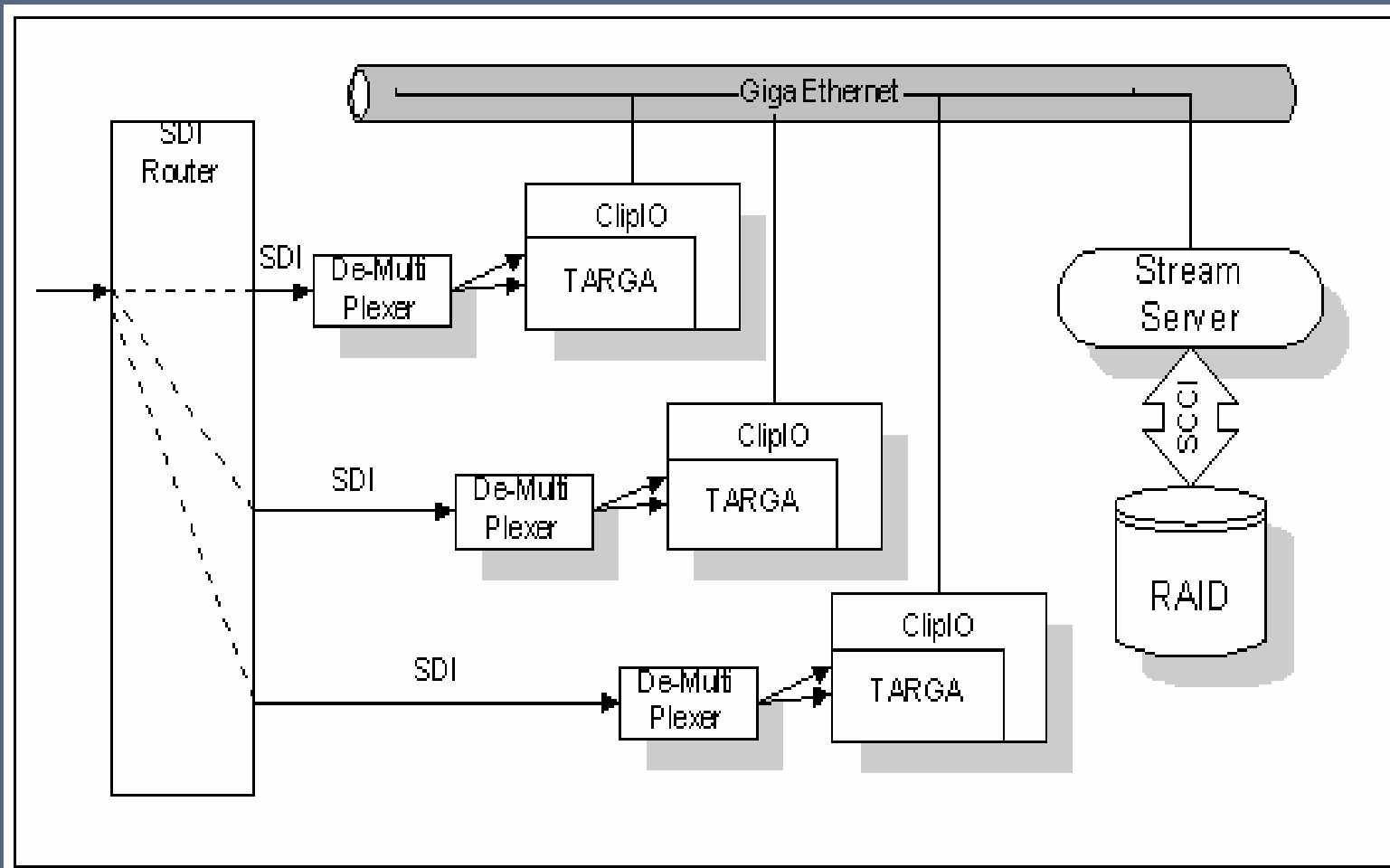


Software Hardware Layers





Stream Server



Consolidamento Audio

