

GSVM 1/13

1200 24000 30
2300 30000 13
1 2+4=2
13 → 35!

Doncetti's MUCRA

1972 Mandelbrot
DEA → OBRAZ
DATA → OBRAZ
MODEC → OBRAZOK / PICTURE

FRACAL
1 4/3 (1/3)²

USEBEČNÝ ÚVOD DO HOCIČOHO

1. POUČKA
2. DEČKA
3. UČKA
4. POUČKA, up. Δ
5. DUEČKA, 0 5!

ANALYT. GEOM.
6. FRACT. GEOM.

(x, y, z) → (x', y', z')

UNIKTA TX

USEBEČNÝ ÚVOD DO HOCIČOHO

Computer modeling

1. Analyza problému → MODEL
2. ... modelu → ALGORITMUS
3. ... alg. → PROGRAM
4. ... PROGRAM → UŠKEDAT
5. Analyza algoritmu → PŘEČKA

PROBLÉM

OKNO - SYSTÉM ~ DESKTOP METAFORA

REALITY - MAT. MODEL - CONTR. REPRESENTATION - IMPLEMENTATION - CONTR.

Ako zobrazit' bod z reality na obrazovke? 1. Ručne, ak máme nápad. 2. Fotograficky, ak máme dáta. 3. Maticovo, ak máme model. // Tabuľa GSVM1-LS24.

GSVM-2/13 M-V

5 UNIVERZ
5 VAKOG

EMPIRICKY PRACIONÁLNIE RELATIVISTICKY S. GEB s.g.

FRACAL
3D HLAVNÉ
ZELEČKA
MÁTO KOCKY
3D TLAC

INDUCTIVE DEDUCTIVE
VERHEANT 38
USER 40

MEASUREMENT {m₁, m₂, ... m_n}
INDICATORS
TRIZ
COMP. SCIENCE

ISOMORPHISM

DECLARATIVE, PRO
METAPHORS ~ EXPLAINING ALGORITHMS USING METAPHORS [FUSE]
FRACAL SETS JOES
COMP. GRAPHICS IS AN ANALOGY WITH PHOTOGRAPHY

"SAHÉ OKO" ASYMETRIC JENOSZY

SET WINDOW(0,)
SET VIEWPORT(0,)
SELECT NORMALISATION TRANSPORTATION(0)

VC Realworld ideas
T = 4+3/3

Aká je funkčnosť štandardizovaného výstupu? Súradnice, okno-záver, 6 výstupných primitívov, parametre. // Tabuľa GSVM2-LS24.

GSVM-3/13 FUNKČNOSŤ

PARAMETRE ATRIBUT VEĽKOSŤ APPEARANCE

POLYLINE (3, POINTS) → 3 ⇒ KVADRKA

• CW • NUB • FILL AREA $T = \frac{A+B+C}{3}$

centroid

POLYMERIT $(T_x, T_y) = \frac{1}{3}(A_x+B_x+C_x, A_y+B_y+C_y)$

deCasteljau

BARTICENTRICKÁ SÚM, TĚŽISKA

INTERPOLÁCIA 3 EXTRAPOLÁCIA

NN NEAREST NEIGHBORS

LIN KVADR. KUBIC.

COHP. GEOM. C

FUNCT SPECIFIABLE

SYNTHETIC VISUAL STRUCTURES

MODEL → OBRÁZ SYNTÉZA OBRÁZU

OBRÁZ → MODEL: ANALÝZA + VIZ

IP, CV

ALG. STRATÉGIA

ASCII

GRID BEC

27 < 6088

~ POSETTA

DEC

W3 SCHOOLS

UTF-8 1546 182072

SVG, VBHC, XSD

MESH

OpenGL

ADA, man, mur

C

DEME FOTOPICKE

RGB

W = (1, 1, 1)

GRAY

K = (0, 0, 0)

TELECOLOR 24

Funkčnosť, koherencia, interpolácia. Photo: Kristina RYBAROVA 2024 // Tabuľa GSVM3-LS24.

GSVM-4/13 FUNKČNOSŤ++

JARKE

STRUKTÚRA

AP, GS, WS₁, WS₂, WS_{ET}

VSTUP (C) TRANSMITE

VSTUP (C): LOCATOR, VALUER, STRIKE, CHOICE, MER

COORDINATE SYSTEMS

GET / INSTANCIJE FOR

SET / INSTANCIJE

INITIALIZATION

HIERARCHY 2 LEVELS

WORKSTATIONS

METAFILES

ATTRIBUTE: 1) SEGMENT 2) ENDS 3D (KORD 3D)

FUNCTIONALITY: FILE MANAGEMENT

OBJECT SPACE

TRANSFORMATION (D, D) SUPPORT

VISIBLE (D, D) VISIBL (M)

DETECTABILITY (D, D) DET (M)

DISPLAY (D, D) DISPLAY (M)

VECTO

BLUKE

BUŽE

INDIVIDUAL

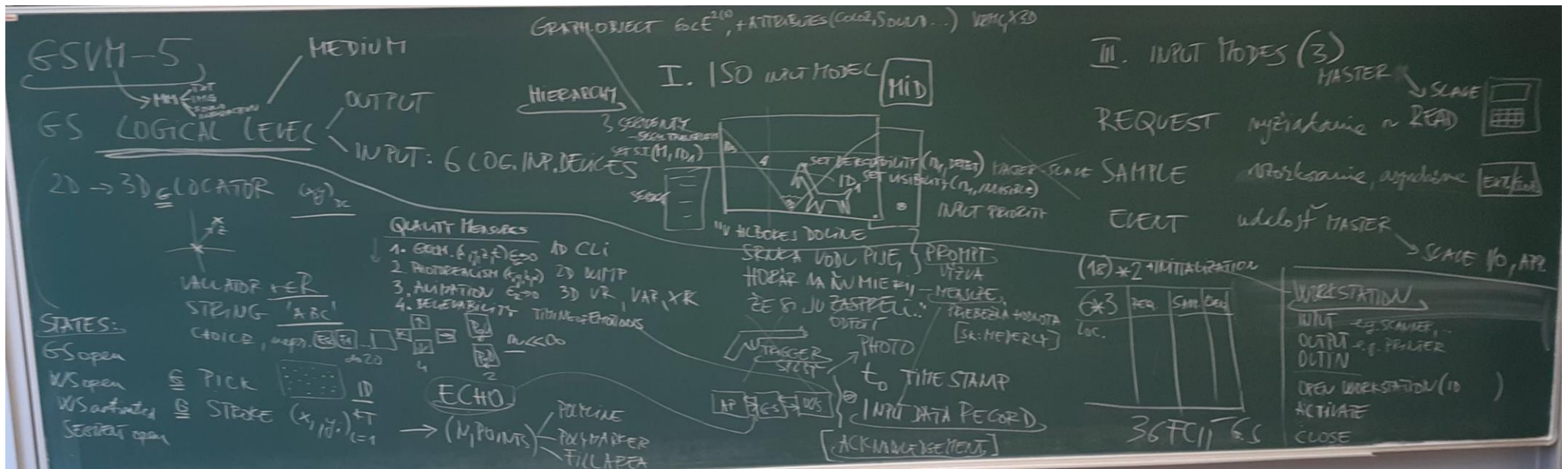
INSTANTA

PROJECT SOURCE FLAG

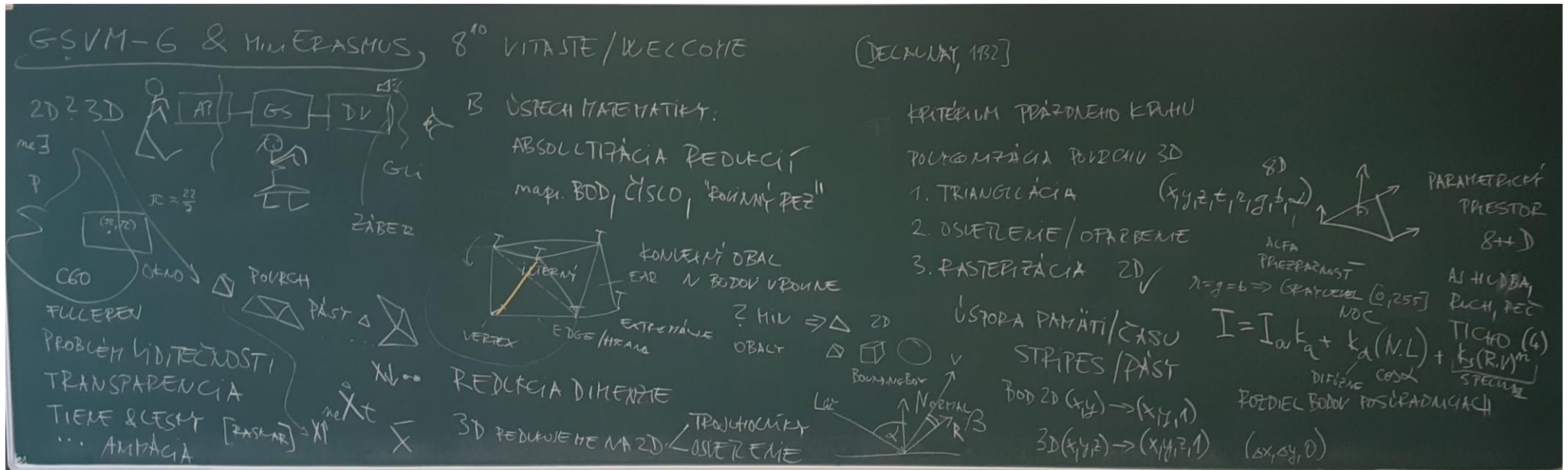
3D

TELECOLOR 24

Logicky input bez rezimov a ISO modelu. // Tabuľa GSVM4-LS24.



Logicky input, rezimy a ISO model. // Tabuľa GSVM5-LS24.



2D---3D, Delaunay, Phong. MiniErasmus. // Tabuľa GSVM6-LS24.

GSUM-7 & MID

$(E^2, d) \leftarrow$ $(x, y, 0)$ VECTORS / Vektor / vektor
 MATEMATIKA / Matica / matica
 $N = \frac{N_1 + N_2}{2}$

1977 PRISLOŽJE / PRILOG
 MANJEKROTI

MEZIANE
 VIZUALIZOVANE

ILLUMINATION LOCAL, 3D \Rightarrow 2D
 GLOBAL, 3D (E^3, d)

[KAVITA] TERRAFLOP CLUB

1977 PRISLOŽJE / PRILOG
 MANJEKROTI

(R, G, B) $R, G, B \in [0, 1]$ R
 TEXTURA
 $[0, 255]$ z SHIMMESH
 $k_{ST} \rightarrow k_{LT}$

PHONG \ominus $E \gg 0$
 \oplus LACNO
 Phong
 \rightarrow KOFICIENT ZRAKOVNOSTI

8¹⁵ 40' EČTE

Local and Global Illum., MID. // Tabuľa GSVM7-LS24.

GSVM-8/13

PROC. PHOTO-REALISM-2

ADAM OPAZU: "Svetla" Vektor $(x, y, 1)$
 $(-x, -y, 1)$

DECARATIVE
 SVG WS SCHOOLS
 WWW (COUSCOURS) ISO, IEEE
 VITAL (G) BERT Δ TR. VESN. GOS. ŽE
 Pries. FP

Alco 3D MODELovať? \rightarrow 2D TURTLE GRAPHICS
 \rightarrow EAGLE
 e.g. STANFORD BUNNY M⁴ LLNS

Alco 3D REPRESENTOVAT?
 TERACOTA
 UTA TEAPOT \sim 300 BIVOK
 \sim PLOŠKA (CUBIC PATCH) \sim CSG

3.3. COWS

SHAPE GRAMMARS

INTERFACE SET
 FIREMÉ TRAJOMSTVA
 e.g. DOC

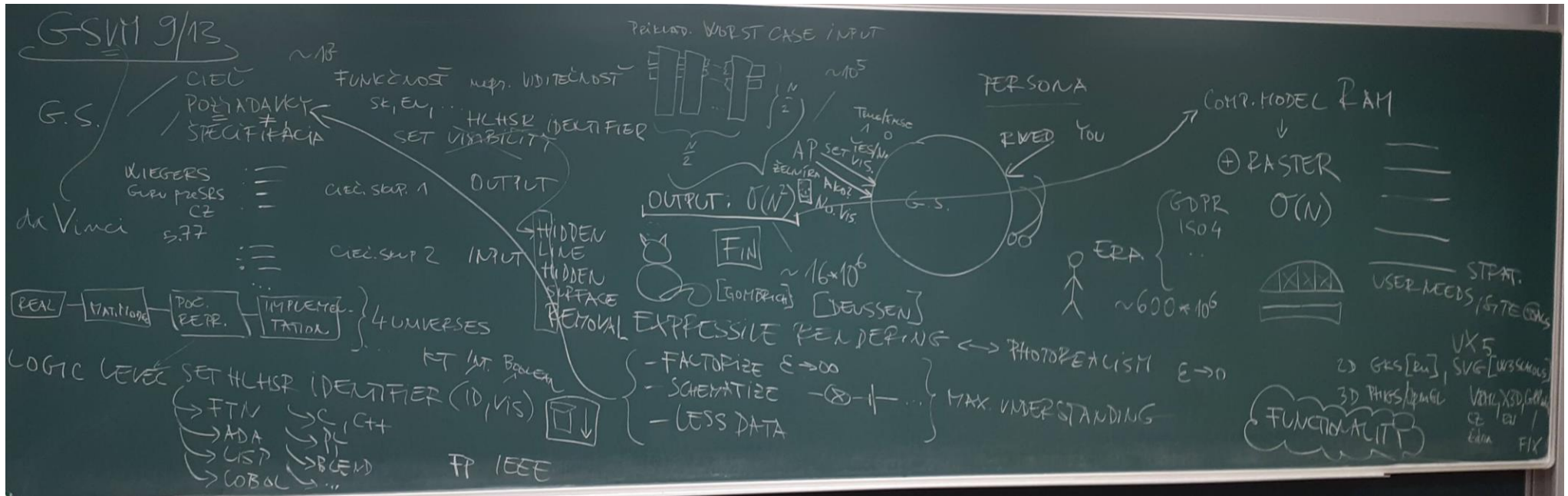
MAKELIF
 BLENDER
 LINUX

FOSS

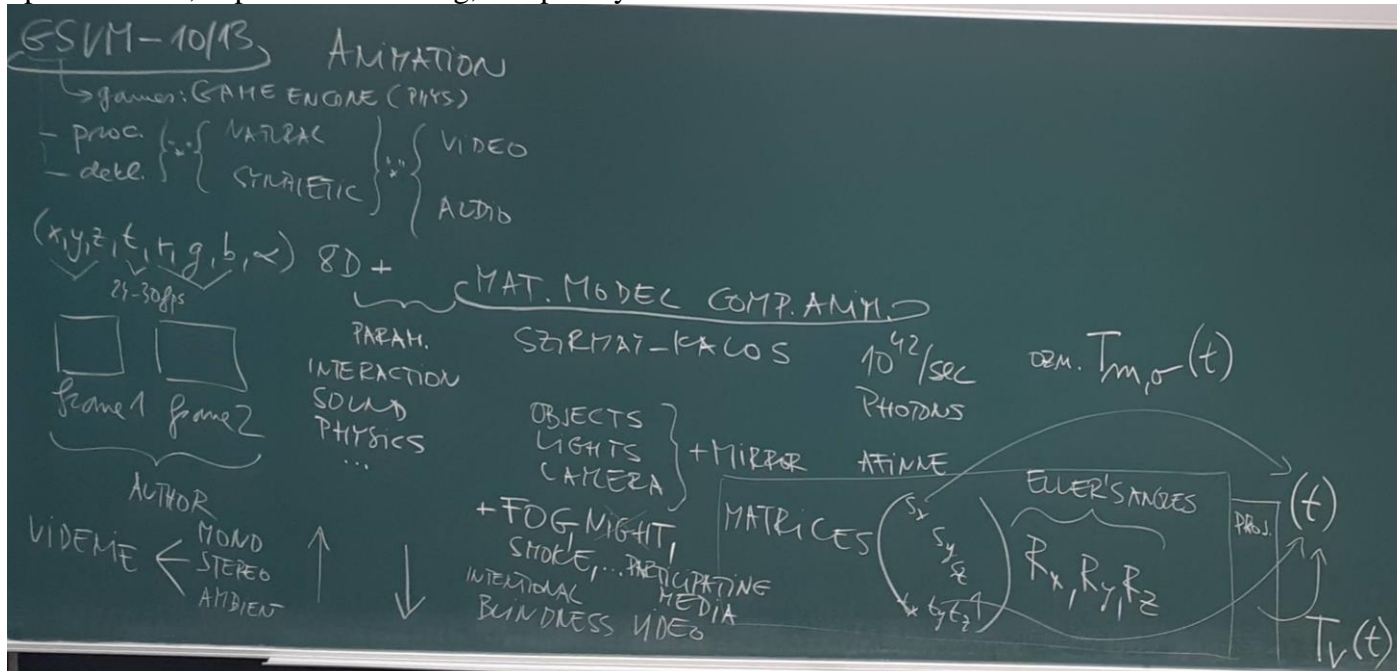
SVETLO 100W \sim 10^{42} Fotónov/s
 \downarrow
 POSITIVÉ MAX. 10⁷ $E \sim 35$ PADOV

PROJEKCIA
 PARALELNA $(x, y, 1)$
 $\begin{pmatrix} 1 & & & \\ & 1 & & \\ & & 0 & \\ & & & 1 \end{pmatrix}$

Ako modelovat a reprezentovat. Photorealism 2 // Tabuľa GSVM8-LS24.



Specifications, expressive rendering, complexity. // Tabuľa GSVM9-LS24.



Animation after Szirmay-Kalos. // Tabuľa GSVM10-LS24.

