
45LF

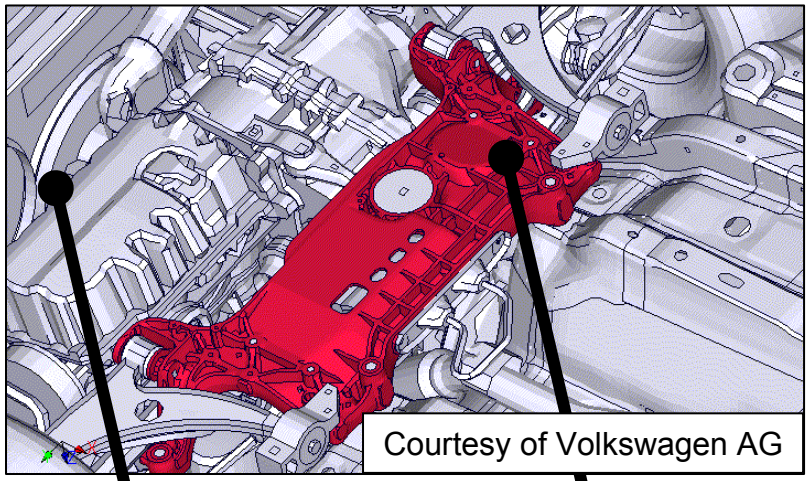
ESI GROUP
THE VIRTUAL TRY-OUT SPACE® COMPANY

Nouveaux besoins en simulation de crash

C. JACOB
Forum TERATEC
20 juin 2007

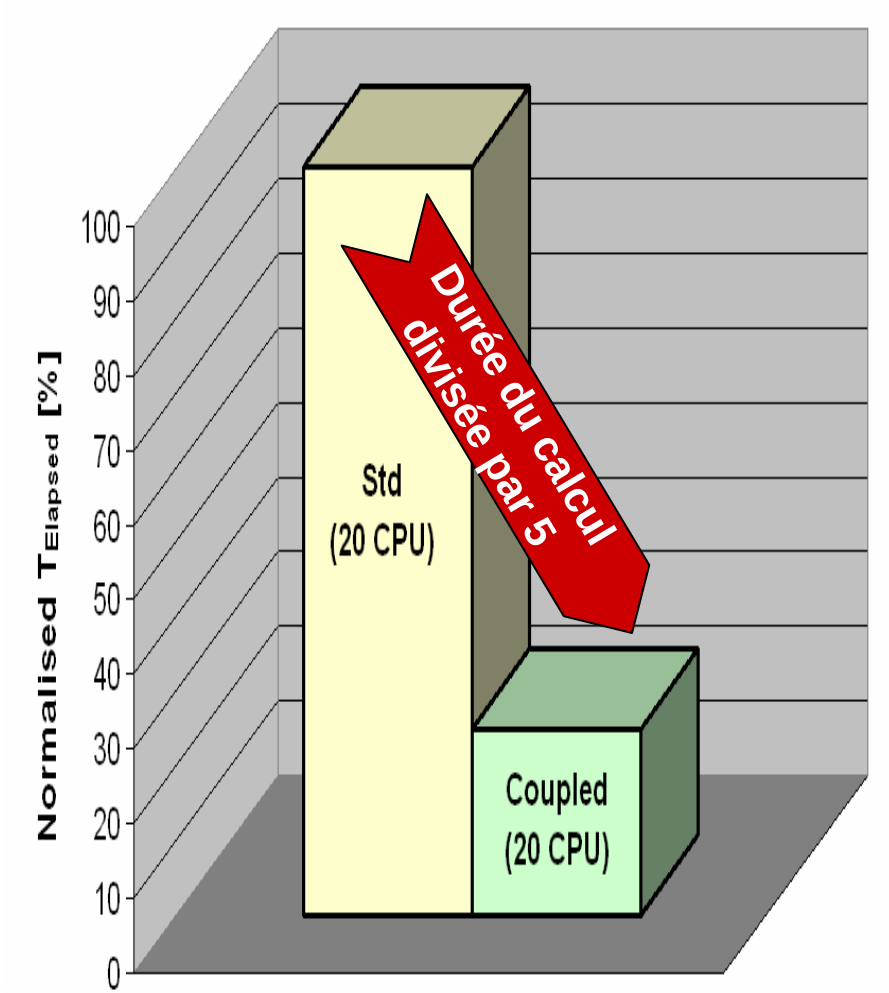
CREATE
WITHOUT LIMITS

Gagner du temps grâce au multi-échelle

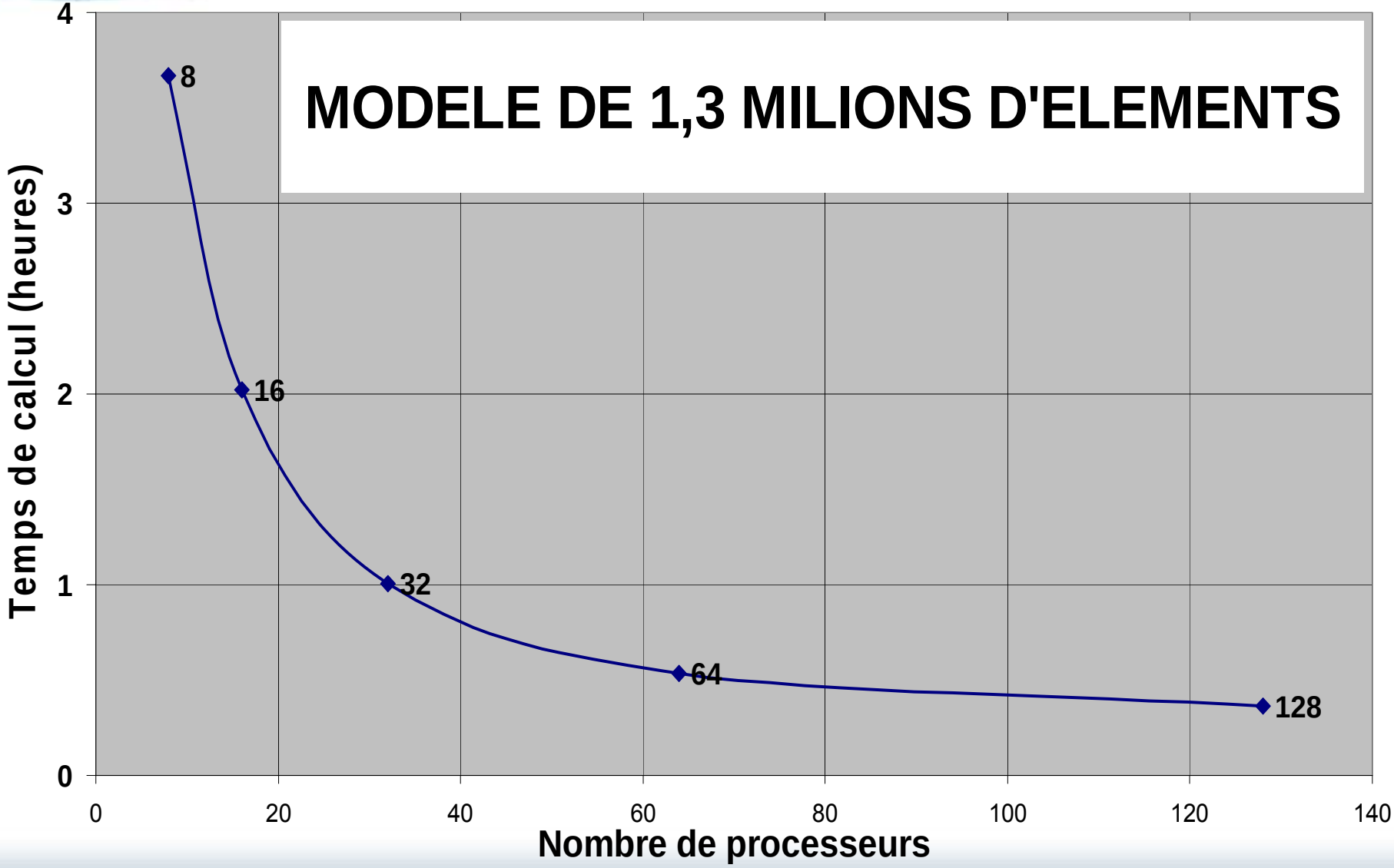


Modèle véhicule
879.000 Eléments
$\Delta t = 1\mu s$

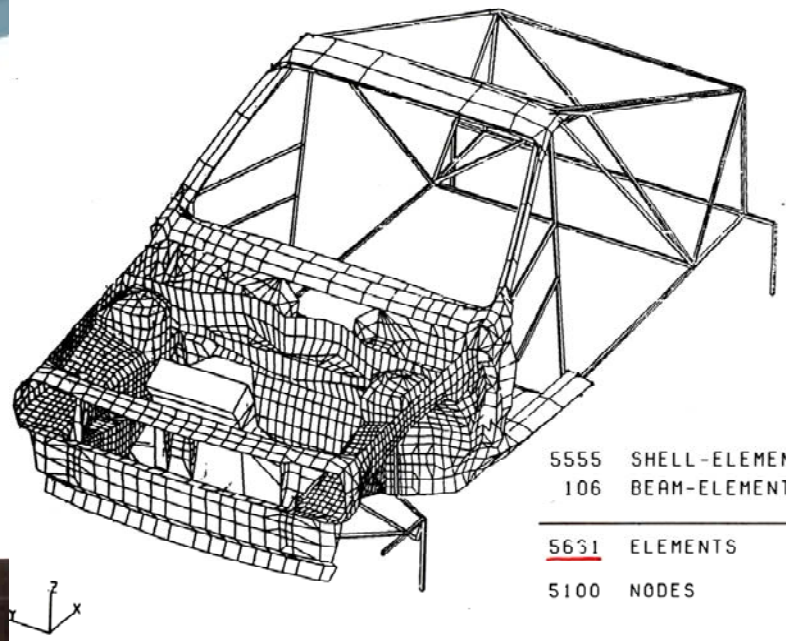
Modèle fin
65.000 Eléments
$\Delta t = 0.1\mu s$



Scalabilité de PAM-CRASH



Simulation de la rupture
Toujours plus de précision



MASSENVERTEILUNG POLO-FEM-CRASH

BAUGRUPPE	MASSE NASTRAN	FAKTOR	MASSE FEM-CRASH
AGGREGAT	130.0 KG	1.0	130.0 KG
2 RAEDER VORN	70.0 KG	1.0	70.0 KG
2 RAEDER HINTEN	62.0 KG	1.0	62.0 KG
LENKGETRIEBE	4.6 KG	1.0	4.6 KG
STABILISATOR	4.4 KG	1.0	4.4 KG
VORDERTEIL KAR.	54.6 KG	1.2	65.5 KG
HECKTEIL KAR.	64.0 KG	1.2	76.8 KG
PLATTE AUF DACH, RAHMEN,STANGEN	38.0 KG	1.0	38.0 KG
MESSKISTE	30.0 KG	1.0	30.0 KG
KABELBAUM, STOSST.HINTEN	20.0 KG	1.0	20.0 KG
			501.3 KG
RESTMASSE IM SCHWERPUNKT			23.7 KG
			525.0 KG

DURCHGEF. MASSNAHMEN ZUM MASSENANGLEICH

1. RESTMASSE IN SCHWERPUNKT
2. GEWICHTSFAKTOR GROESSER ALS 1

5555 SHELL-ELEMENTS
106 BEAM-ELEMENTS

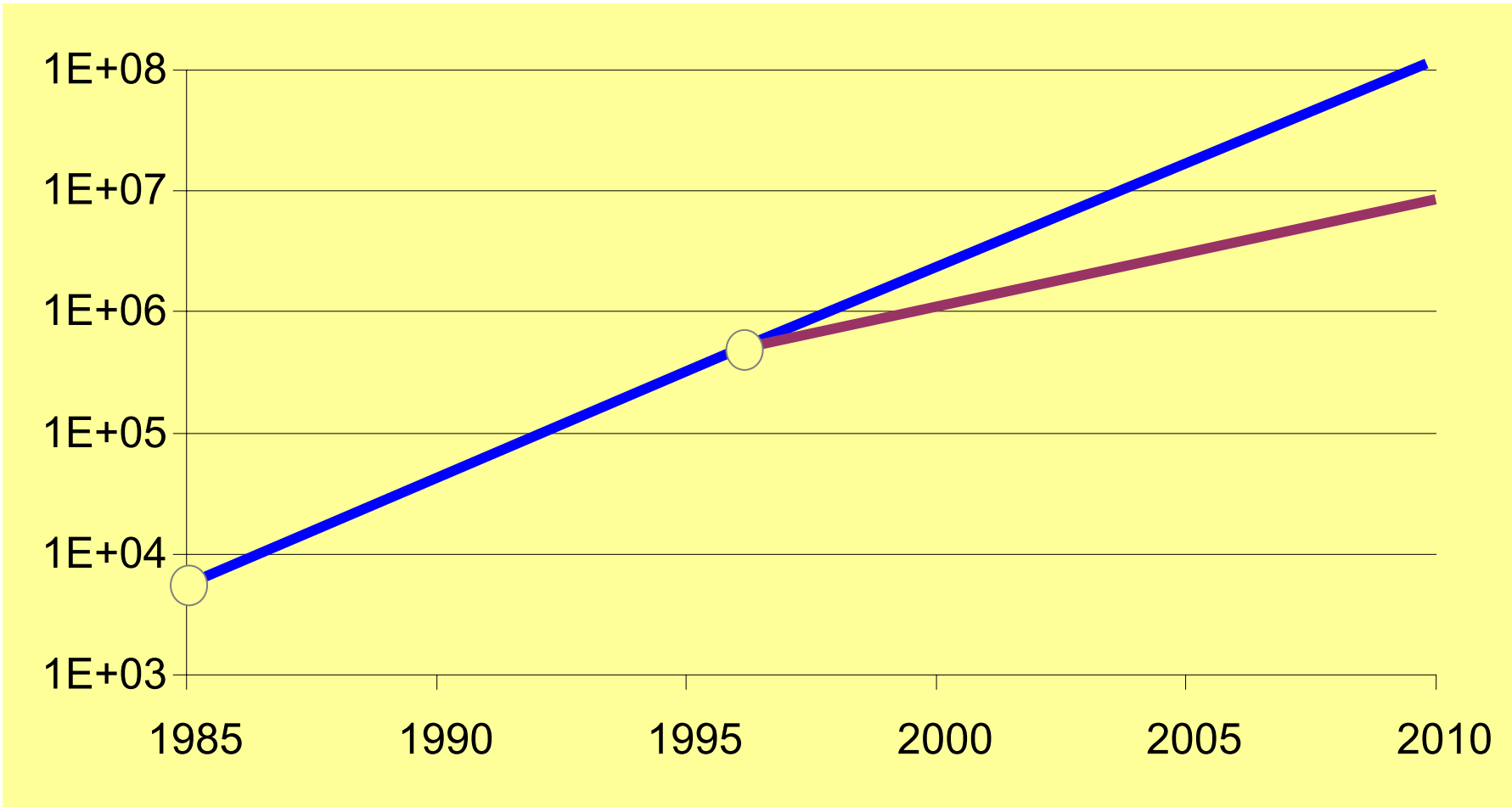
5631 ELEMENTS

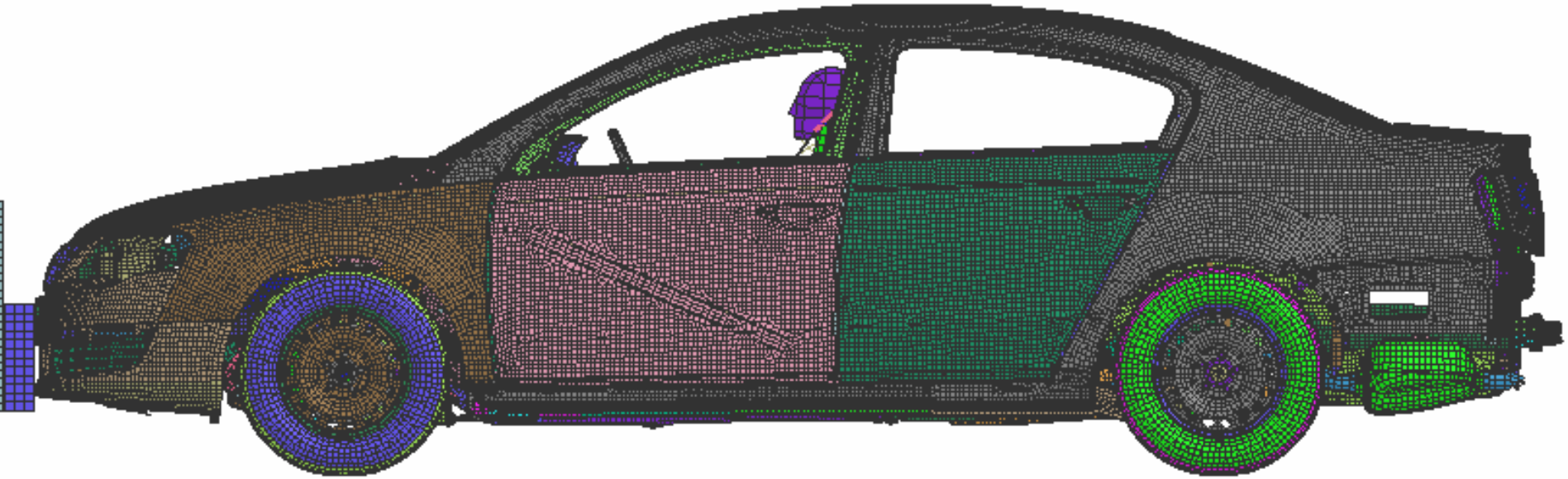
5100 NODES

Bild 3: FEM VW-POLO/ESI PAM-CRASH; Rechenmodell

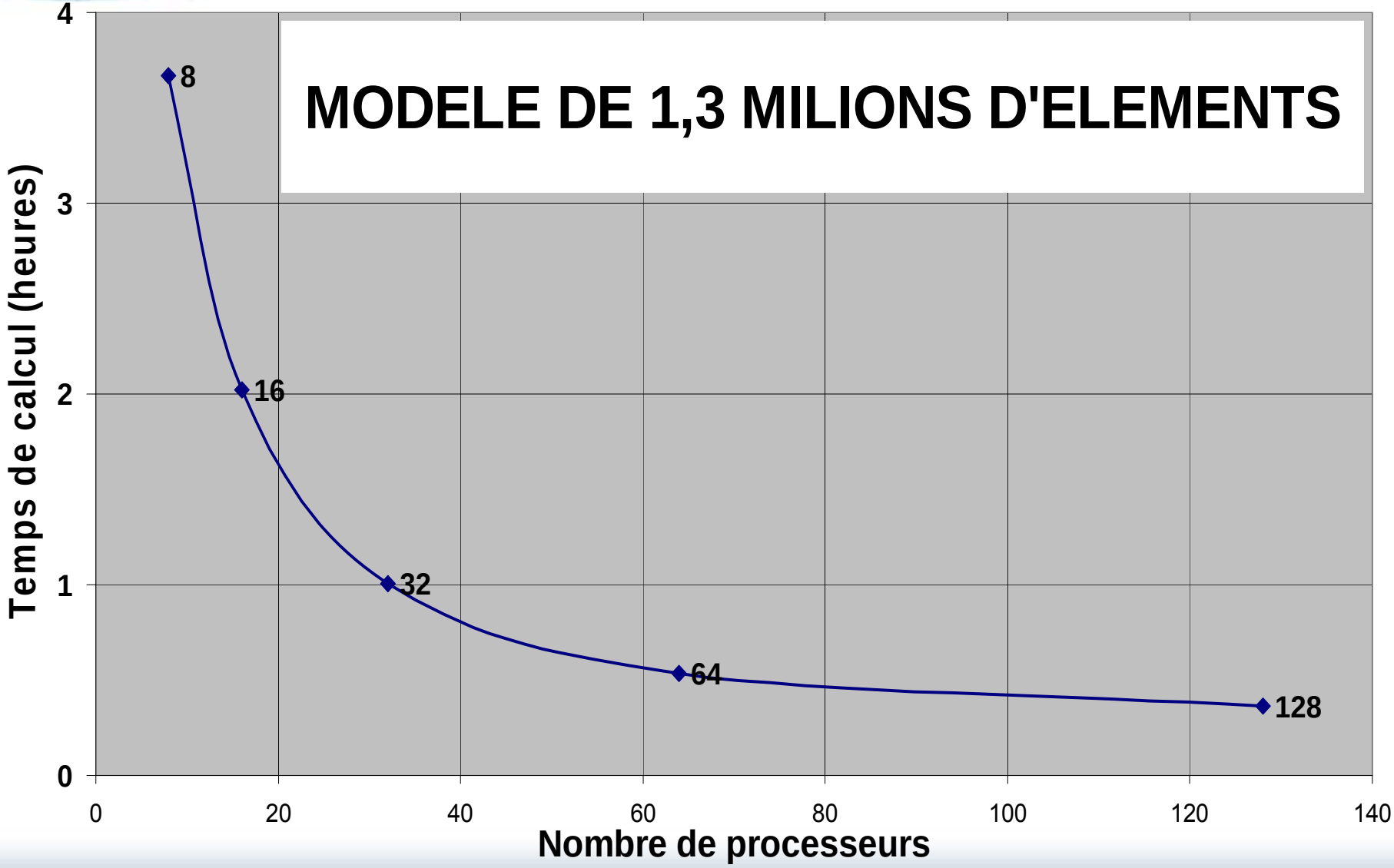
VW-POLO (1985)
FIRST SUCCESSFUL FULL CAR CRASH SIMULATION

Taille des modèles de voiture





Scalabilité de PAM-CRASH



Service simulation à la demande

Portail
Sécurité
Hébergement
Services et intégration

Logiciel
Services
FLUENT

Logiciel
Services
PAM-CRASH

Applications
Clients

Machine
Stockage
Infrastructure
Services

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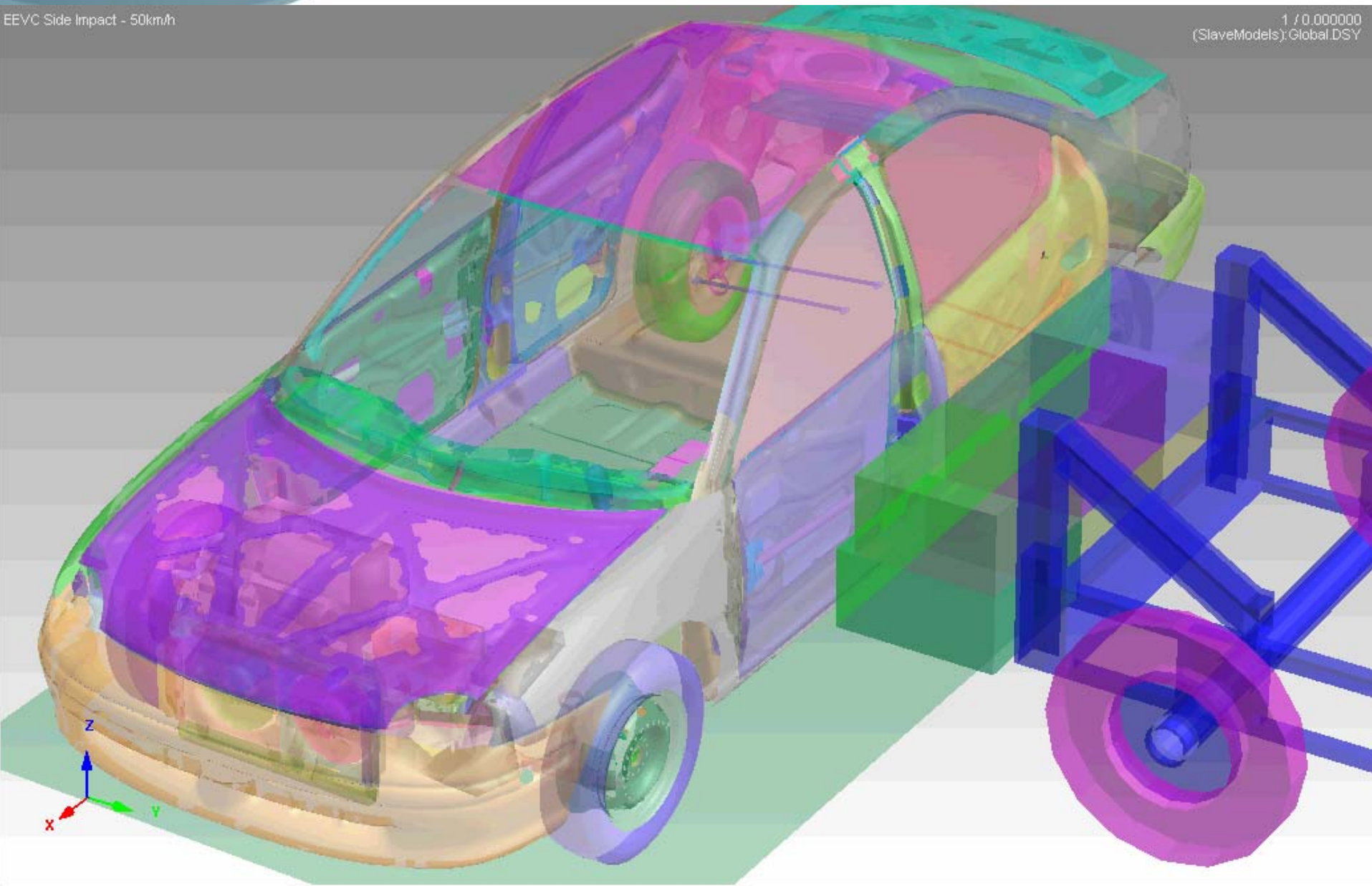

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WITHOUT LIMITS