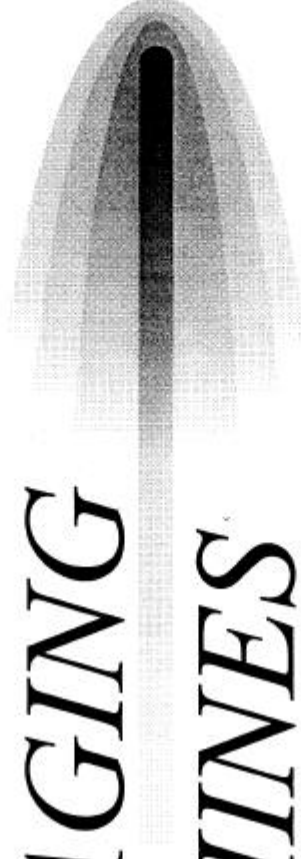




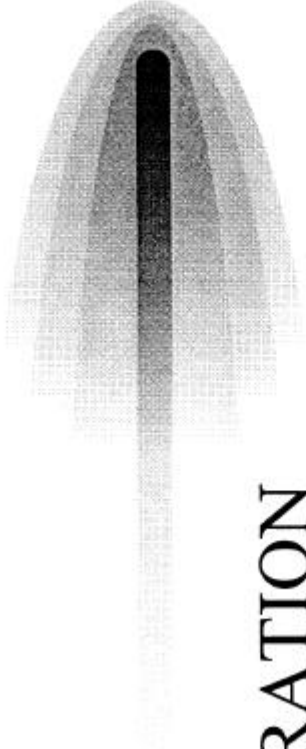
*SIMULATION
OF
PACKAGING
MACHINES*



MEAD EUROPE ENGINEERING

13 th European ADAMS Users ' Conference
November 18-19 , 1998

AGENDA



- MEAD CORPORATION
- ADAMS ' OBJECTIVES FOR M.E.E
- DEMOS
- DESIGN PROCESS
- CONCLUSION
- NEXT STEP



MEAD PACKAGING

• PAPER BOARD
DIVISION

-CARTON PRINTING
-CARTON CUTTING

Atlanta
Bristol
Trier
Châteauroux
Billbao
Milan
Shimada
Roosendaal

• MACHINERY
DIVISION

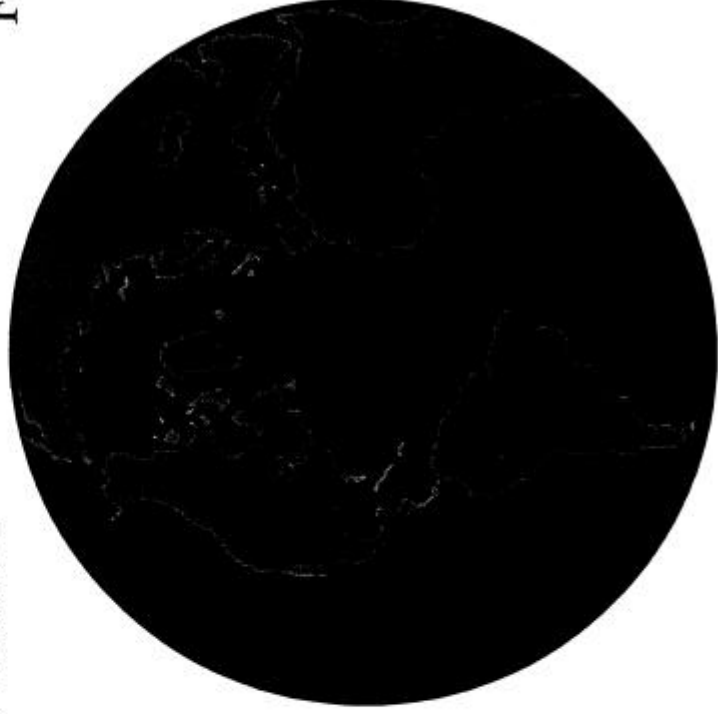
-MACHINES DESIGN

Focus on new technologies :

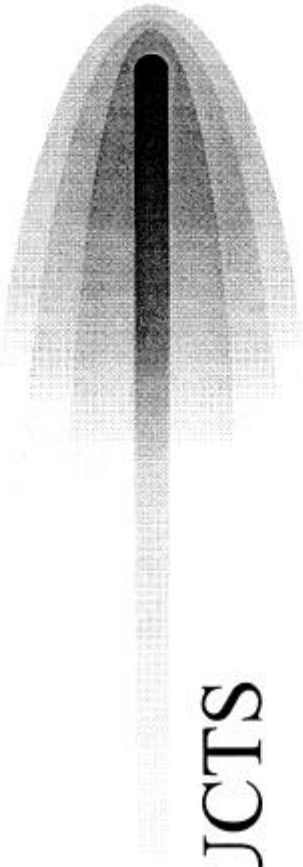
- Full servo machines
- New materials

Atlanta

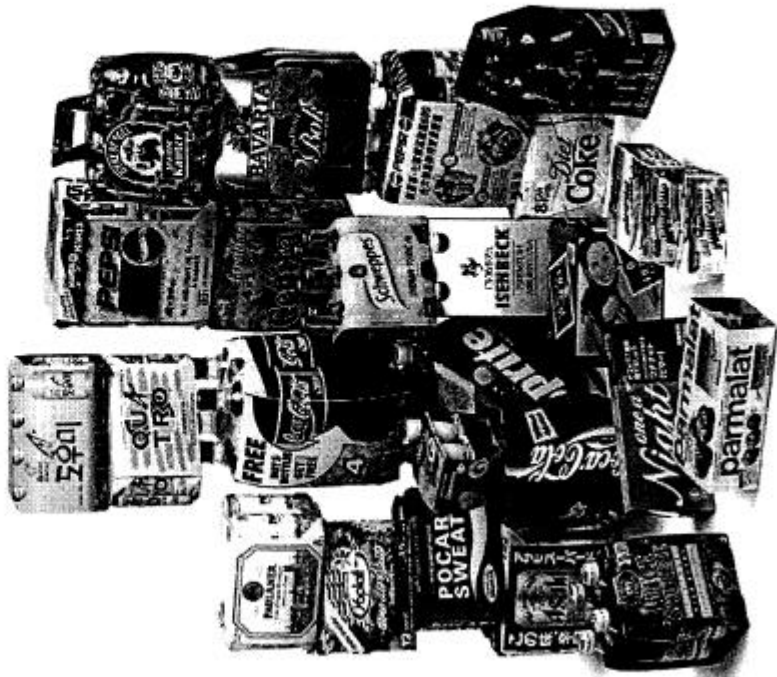
(MEAD EUROPE ENGINEERING)
Chateauroux (F)



MEAD EUROPE ENGINEERING

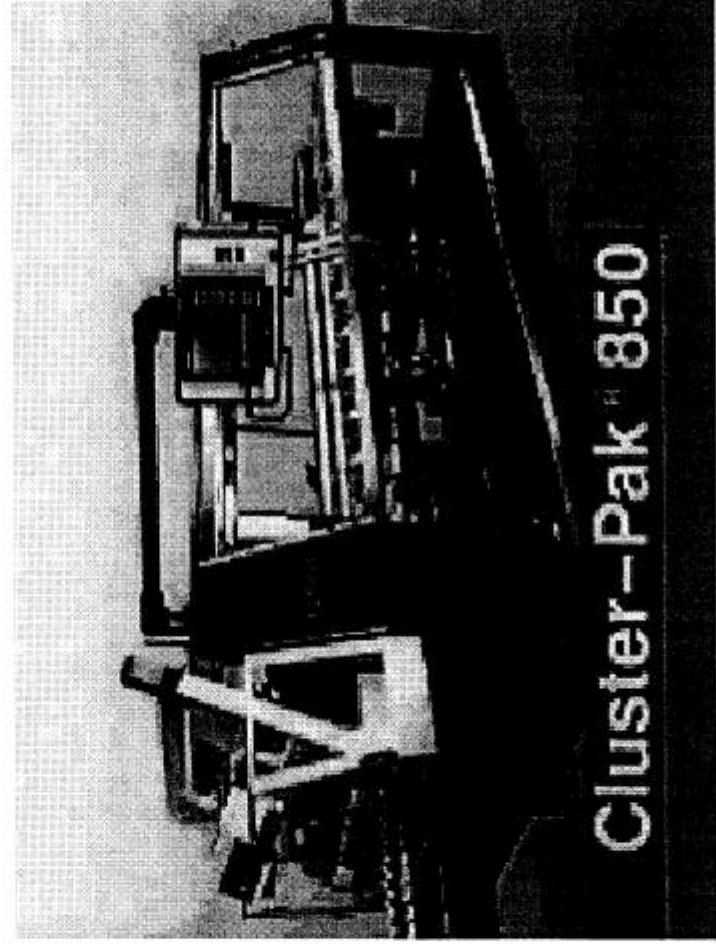


PRODUCTS



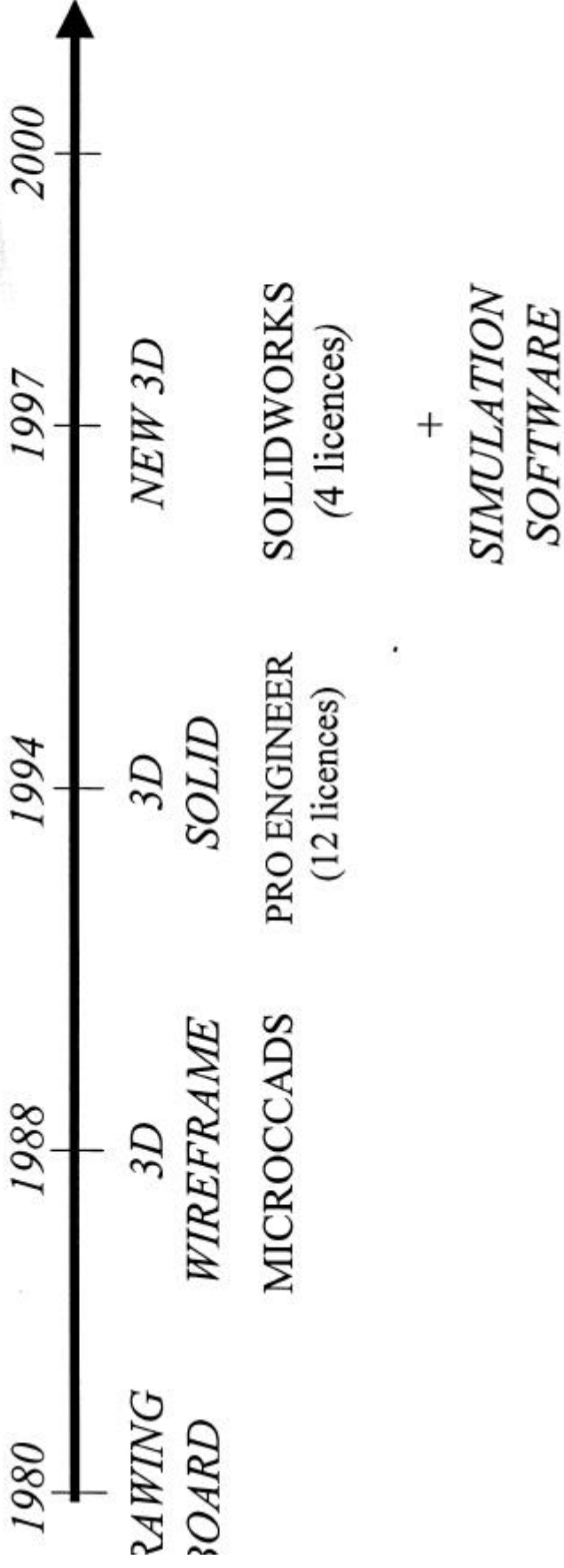
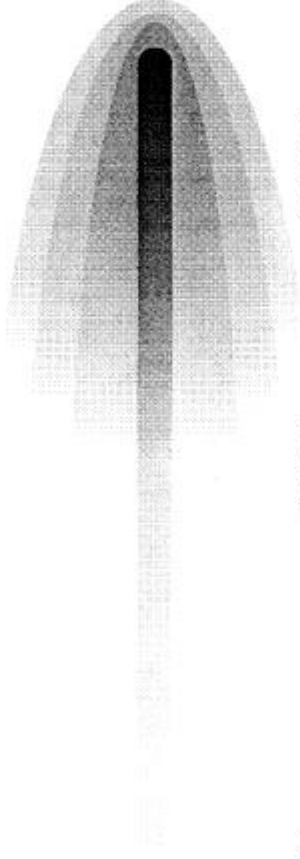
MEAD EUROPE ENGINEERING

MACHINES



Cluster-Pak[®] 850

DESIGN TOOLS

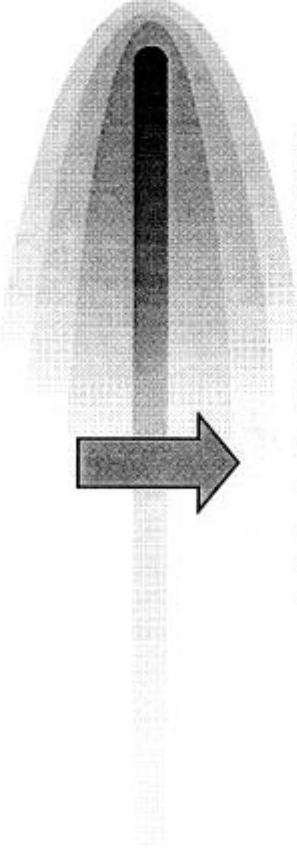
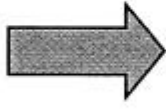


ADAMS' OBJECTIVES FOR MEE

- Why use ADAMS?
 - Reduce the design process time and cost.
 - Help the designers to improve the machine efficiency and capability (reduce mechanical parts, increase programming).
 - Convince our customers they' ll get the machine they need.
- How to use ADAMS
 - Complete Machine Animation with basic models.
 - Sub assembly Simulation with more complex models.

ANIMATION

SIMULATION



• PRO E +

MECHPRO +

ADAMS VIEW +

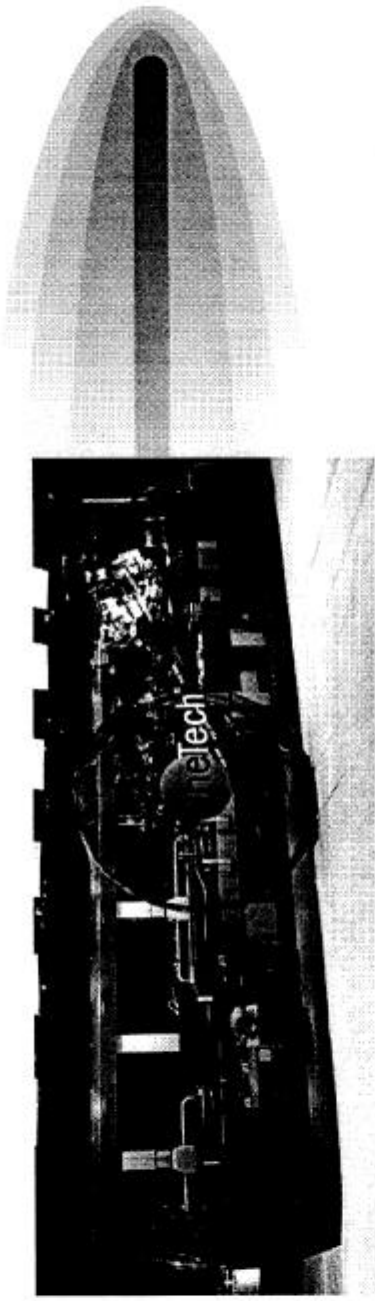
ADAMS ANIMATION

• ADAMS VIEW

• SOLIDWORKS + DYNAMIC
DESIGNER

• ADAMS VIEW

MACHINE ANIMATION



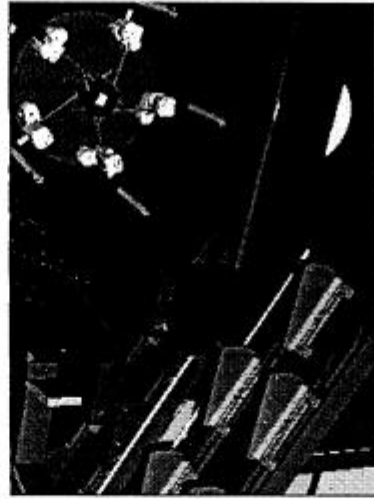
PRO ENG



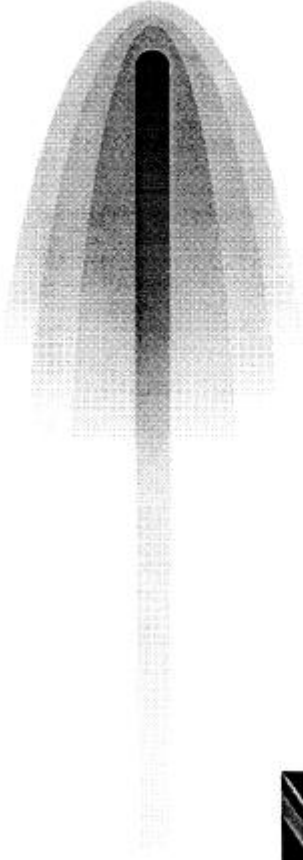
ADAMS VIEW
ADAMS ANIMATION

DEMO 1

MECHPRO
(ADAMS Interface)



PIZZA MACHINE ANIMATION

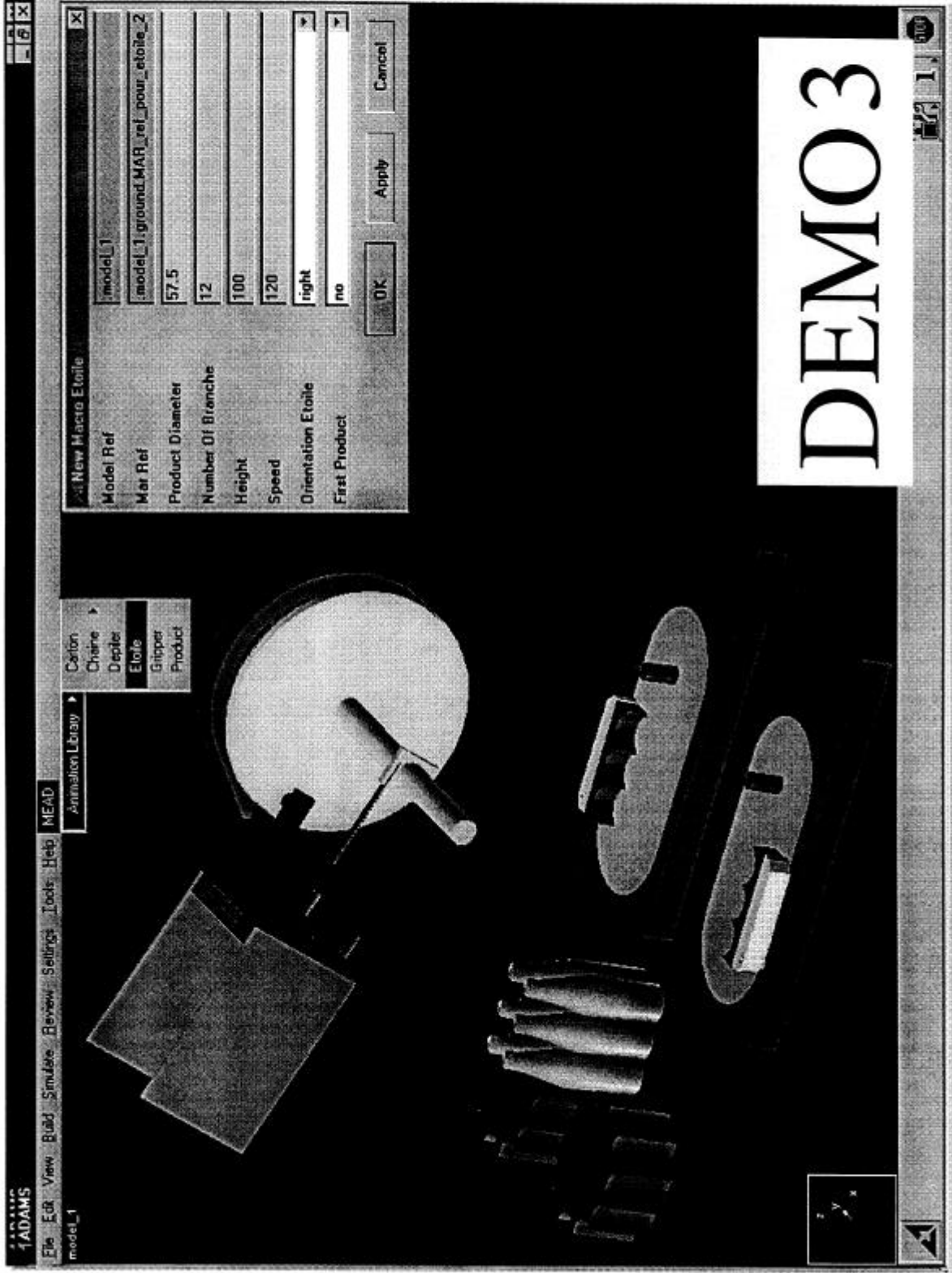


SOLIDWORKS

DYNAMIC DESIGNER
(ADAMS Interface)

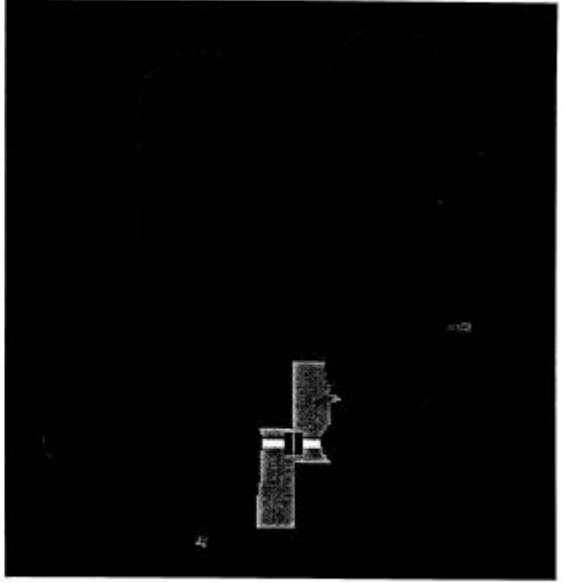
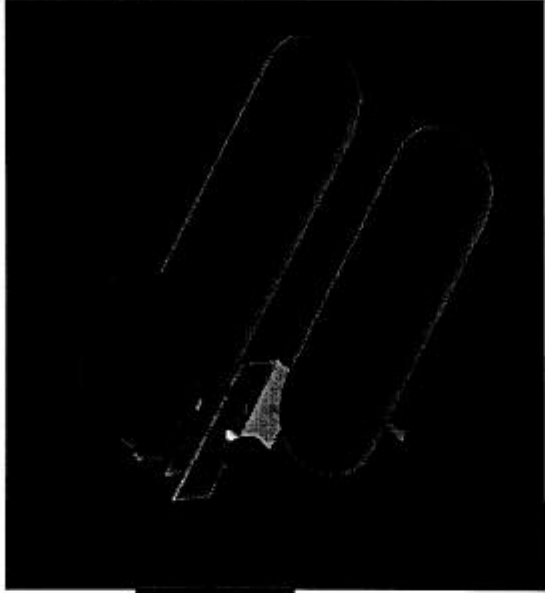
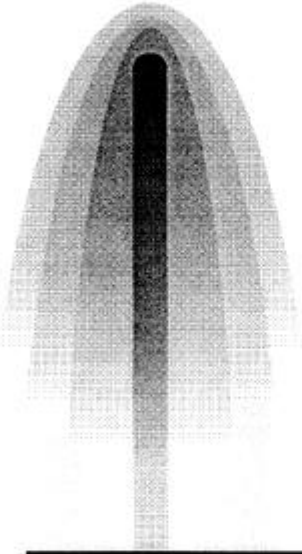
DEMO 2

ANIMATION LIBRARY



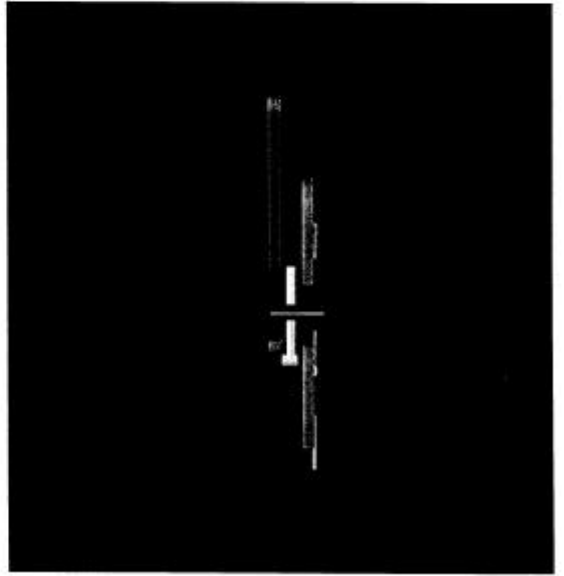
DEMO3

CARTON OPENING SIMULATION

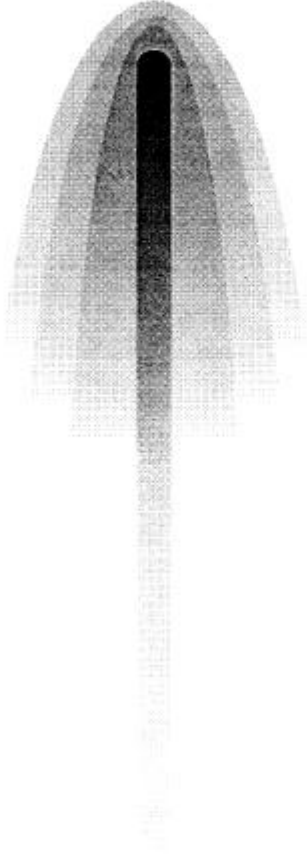


ADAMS
VIEW

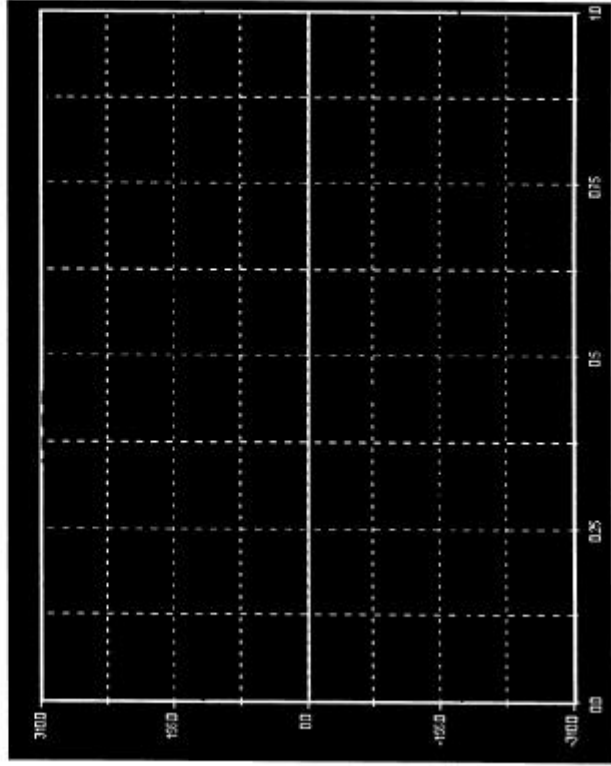
DEMO 4



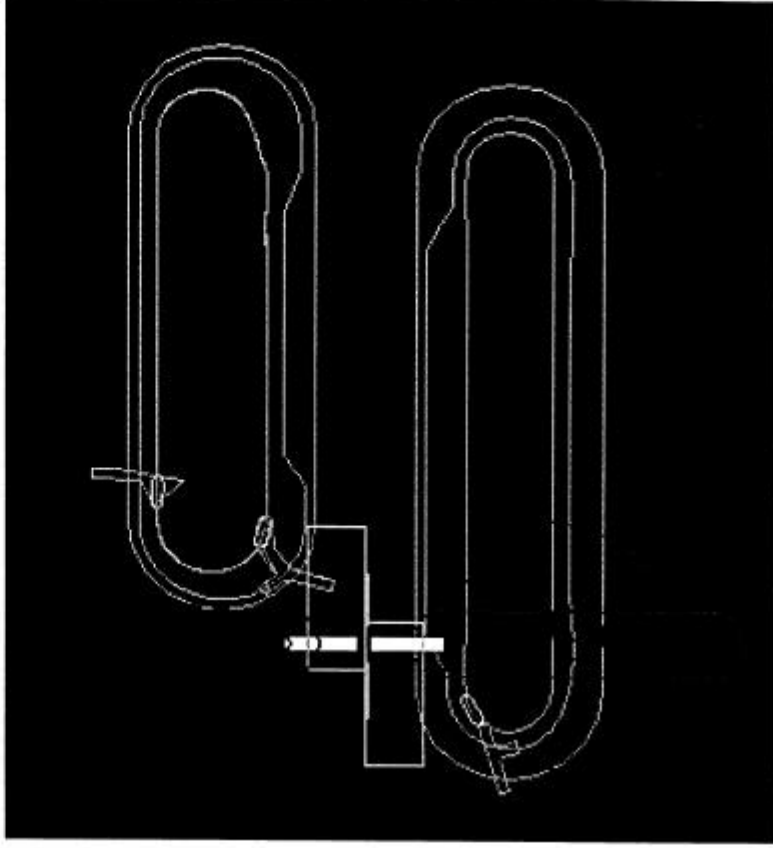
CARTON OPENING SIMULATION



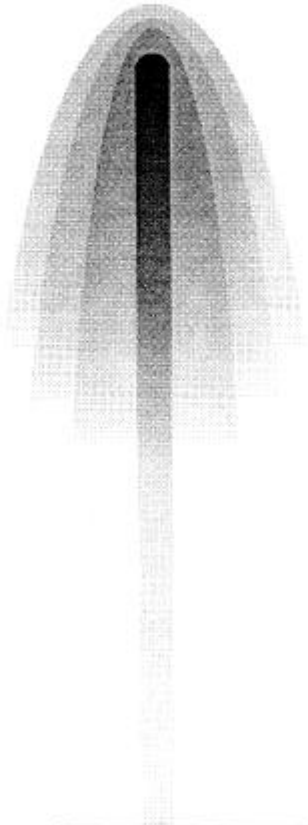
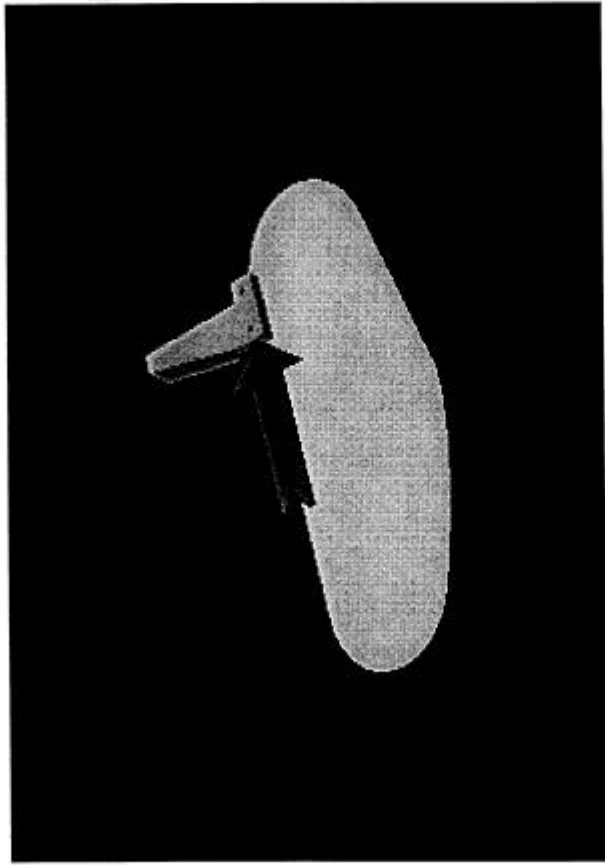
WHEEL 1 VELOCITY



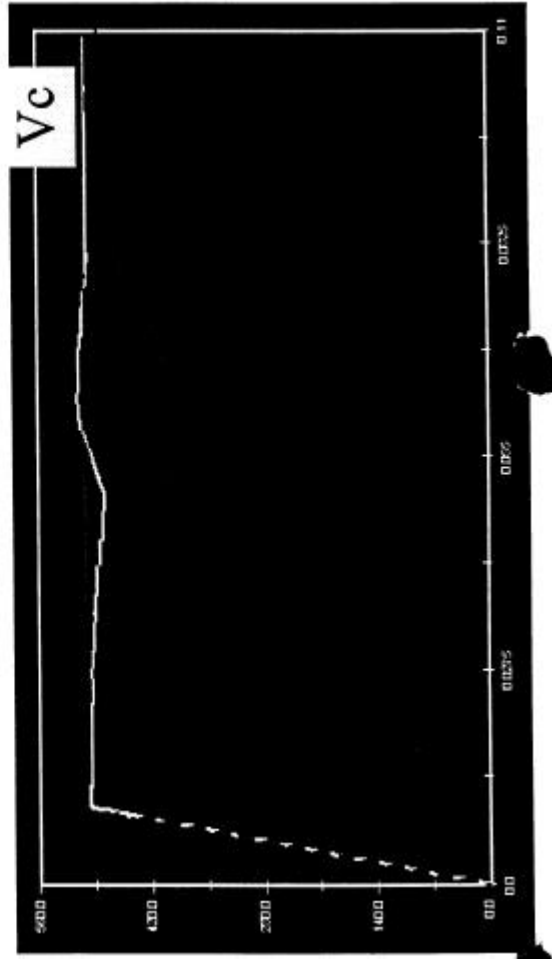
WHEEL 2 VELOCITY



MOTION ON CURVE



$$F = -K(V_t - V_c)$$

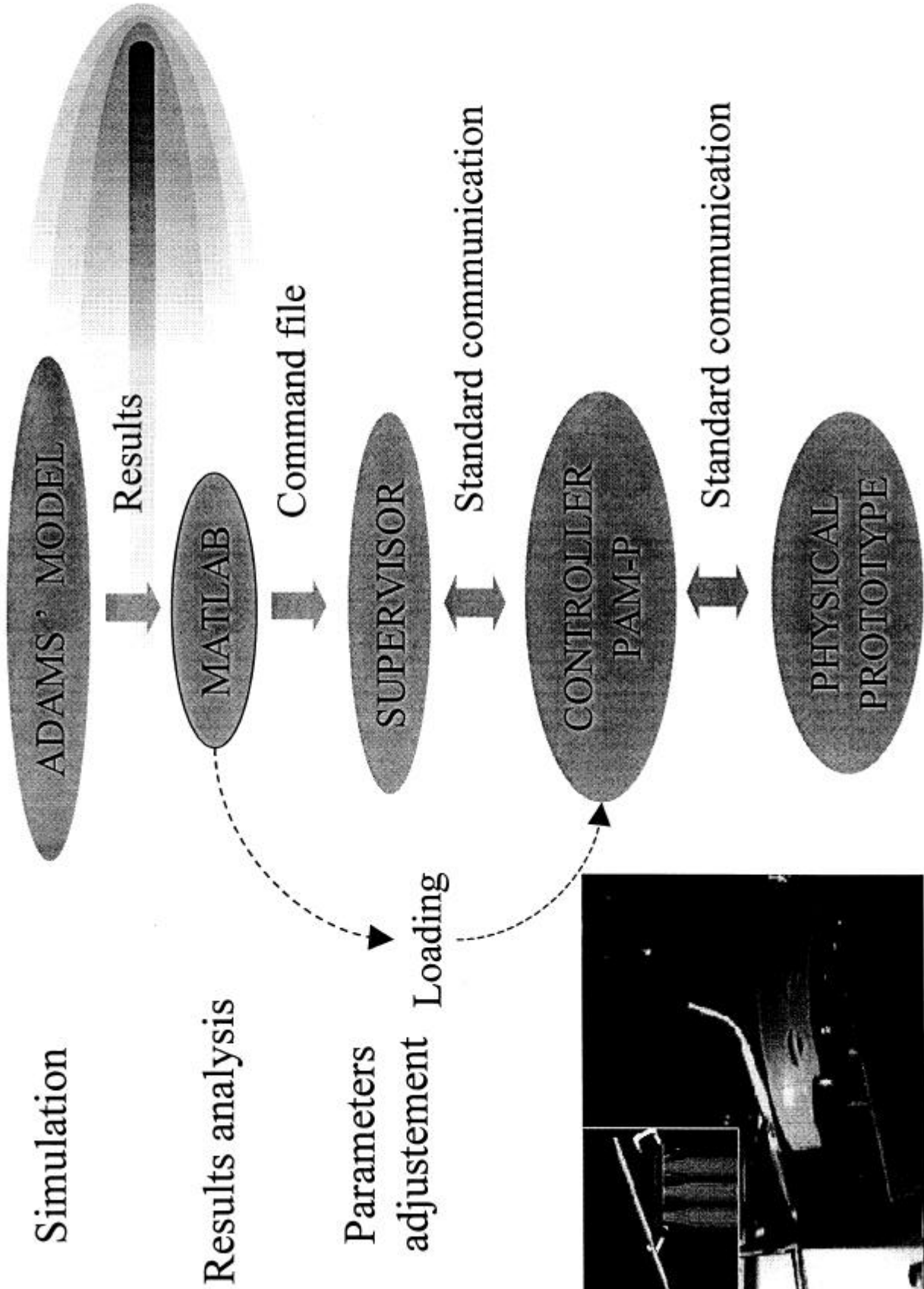


$K=100$

$K=1$

$K=0.1$

DESIGN PROCESS



CONCLUSION

- Customers ask for more and more machine animations.
We are still working to reduce the time to produce them :
(animation library, dynamic designer).
The adams' modeler needs to be improved
(curves, tangents).
- ADAMS is fully integrated with the "new technologies"
being developed in MEE :
(servo system and linear motor programmation).
We want to concentrate our efforts on Synoptics and
Simulations.

NEXT STEP: ADAMS CONTROL

CONTROLLER MODEL

MECHANISM MODEL

