

Advanced Scripting: Closed loop Blood Pressure control.

Stefan Mönk



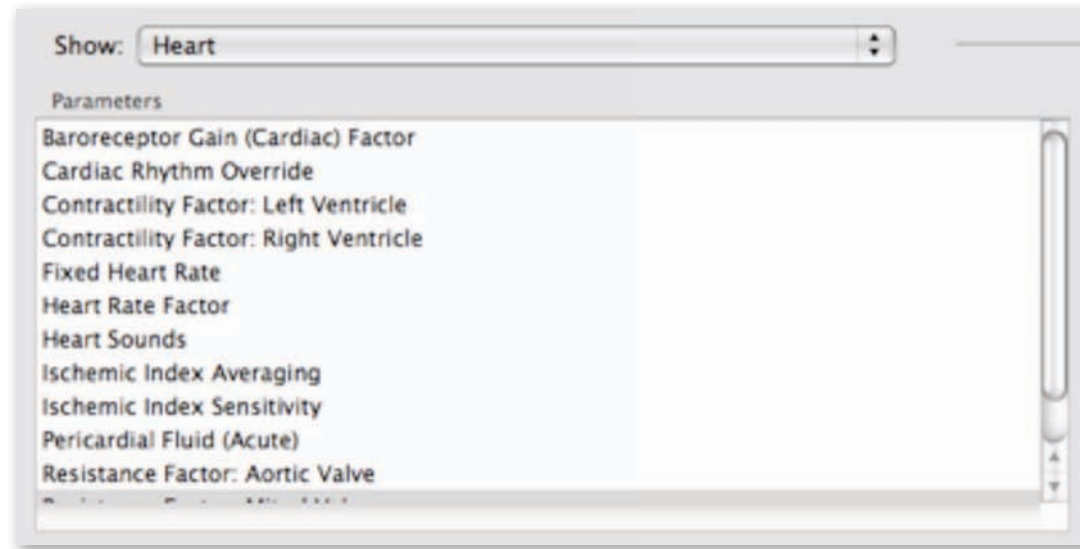
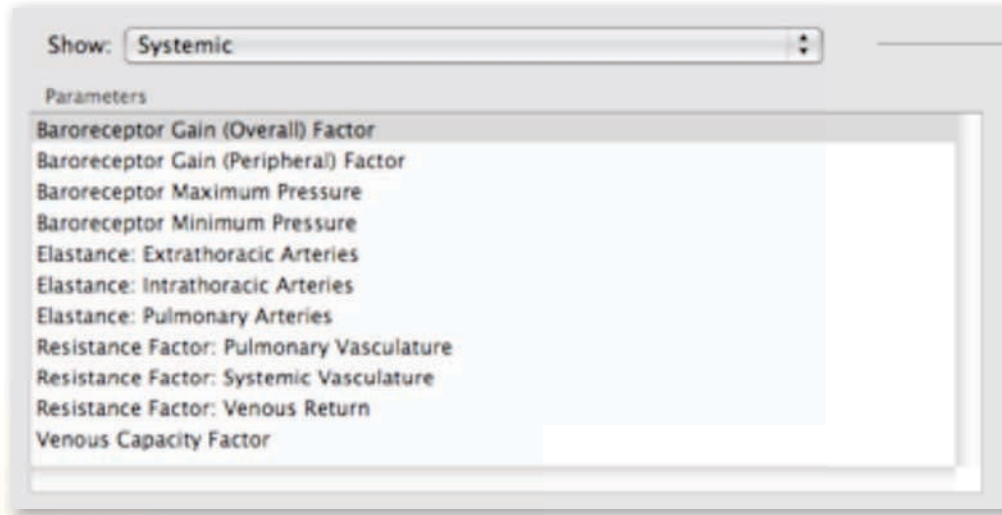
Stefan Mönk

- Anesthesiologist
- HPS in 1997 (Mainz University, Germany)
- Co-founded 2 centres
- From user to adjunct faculty to full time
- Use, training, development, project management, sales support



METI Medical Education Technologies, Inc.

BP control in HPS is complete



BP control

- Baroreceptor control may be challenging
- ca. 30 parameters for the cardiovascular control
- Plus: Pharmacological agents
- Plus: Respiratory system

Changes „on the fly“

- Take volume out
- Infuse volume
- Increase venous capacity
- Decrease venous capacity
- But: How much???


Educational thoughts

- Concentrate on teaching
- Observe learners
- Interact with learners
- Avoid complicated interactions with your educational tool

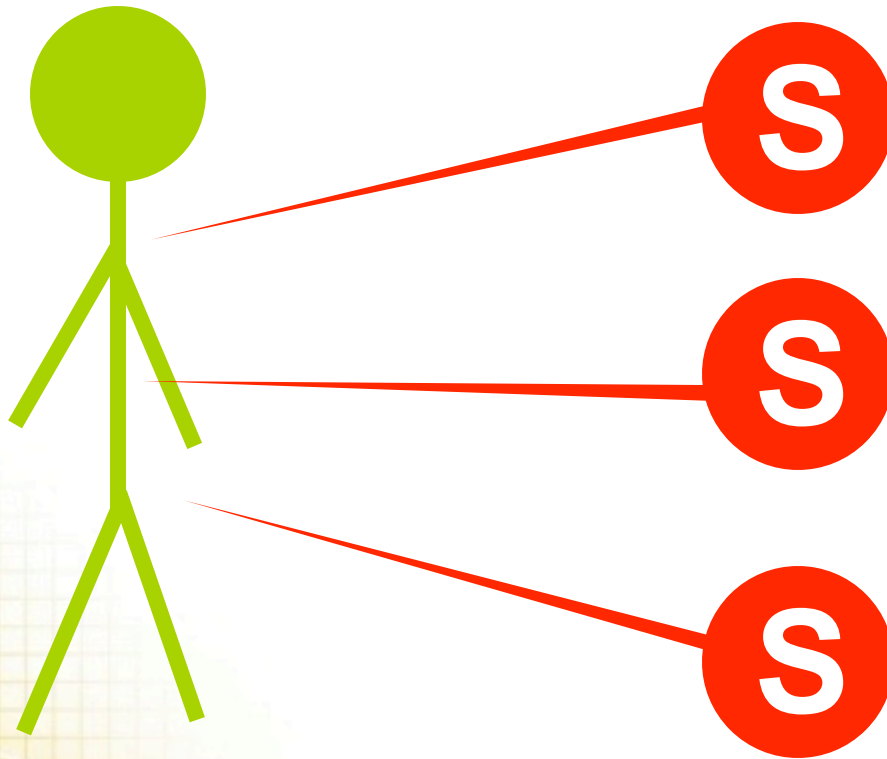
Demonstration



Which tools did we use?

- 
- Combine scenarios
 - Closed loops
 - Multiplications
 - Option variables

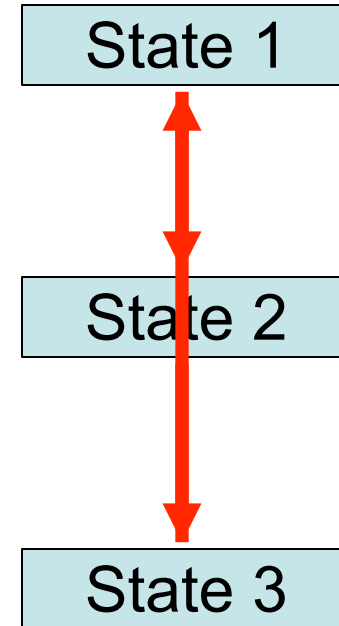
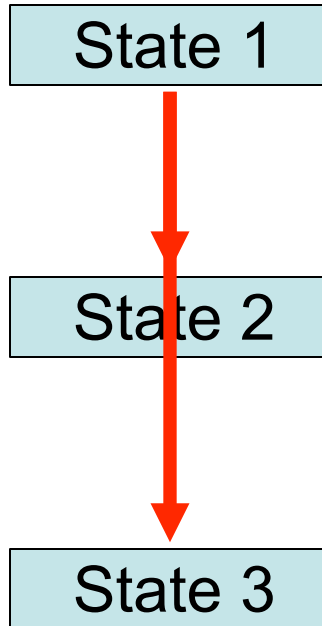
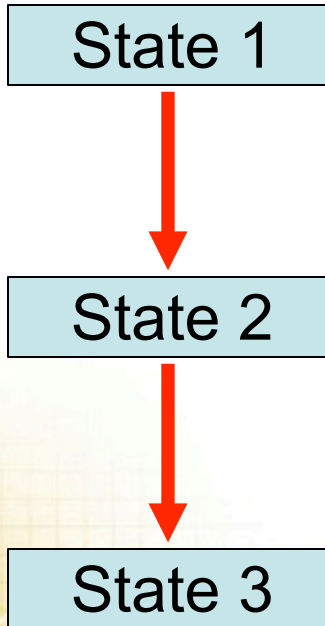
Combine Scenarios



Which tools did we use?

- Combine scenarios
- Closed loops
- Multiplications
- Option variables

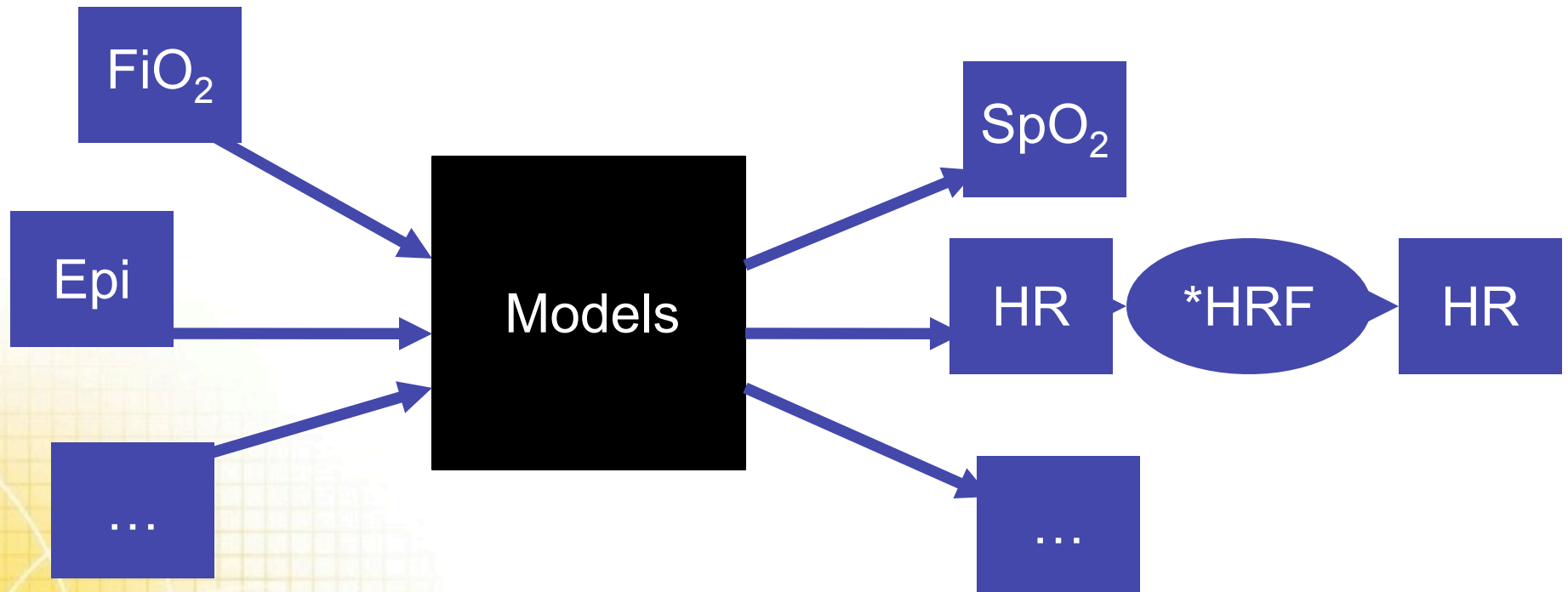
Closed loops



Which tools did we use?

- Combine scenarios
- Closed loops
- Multiplications
- Option variables

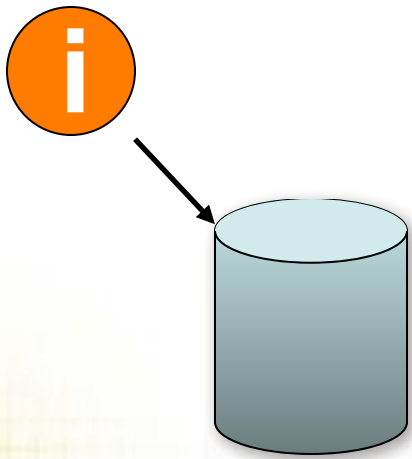
Multiplications



Which tools did we use?

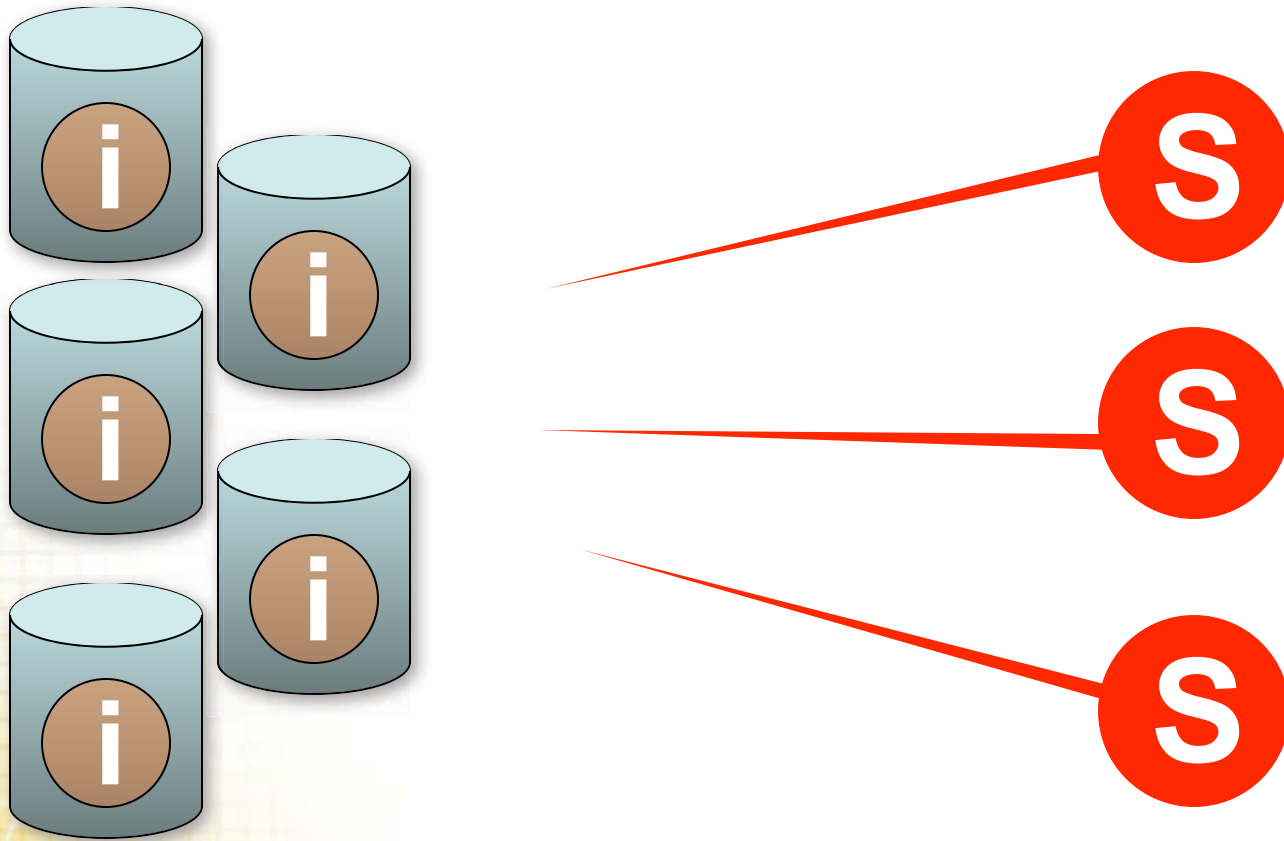
- Combine scenarios
- Closed loops
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Option variables



- HPS has 9 „boxes“
- They are labeled
- Option 1 ... 9
- They can be set
- They can be multiplied
- They are „public“





Combine Scenarios



Option variables plus multiply = counting

- $OV1 = 1$
- if $defib > 200$ then multiply $OV1$ by 2
- if $OV1 = 8$ the goto Sinus Rhythm

Which tools did we use?

-  Combine scenarios
-  Closed loops
-  Multiplications
-  Option variables

