WORKPACKAGE 6: Applications

Questionnaire

Please answer the following questions in as much detail as possible. Send back the compiled questionnaire via email to Stefania Santini, `stsantin@unina.it` (fax no. 0039 0824 305814 (attn. Ms Rossana De Nisi)) by no later than 15th December 2002 (an ASCII reply is also ok).

General Information

Institution:

Department:

Experimental Facilities

Question E1

Do you have experimental facilities related to one of the following applications (indicated in the project proposal) ?

- DC-DC converters or other switching electrical networks;
- Walking Robots or other nonsmooth robotic devices;
- Nonsmooth automotive systems (clutch, driveline etc.)

If yes, please indicate:

1. the main feature of the available experimental facility (max 200 words);
2. the main technological features of the sensors, actuators, physical system or process, interface with data acquisition, type of numerical controller (DSP, microcontrollers or similar).
3. the website, if available, were the experimental setup is described.

Question E2

List other available experimental setups related to the analysis of nonsmooth systems. Do you plan to set up new experimental facilities with the SICONOS funds ? (If yes please describe briefly what type of experiments, same points indicated in the previous question).

Question E3

Indicate the aim and scope of the experiments carried out sofar (max. 200 words)

Question E4

List up to 5 references (journal articles or Conference papers) where the results of the experiments described above have been reported.

Question E5

Will your group be able to host researchers from other SICONOS participating groups to work on your experimental facilities ? If yes, how many people per year will you be able to host ? Will you be able to provide guests with some financial support ? If yes please specify.

Models and Simulation

Question S1

Which kind of simulation tools do you use to carry out the numerical analysis of the nonsmooth systems of interest:

1. MATLAB/SIMULINK/STATEFLOW
2. MODELICA
3. SCILAB
4. AUTO97/CONTENT/DSTOOLS
5. Self-developed code. Please specify

Please specify the type of simulation which is typically carried out, e.g. time-integration, bifurcation analysis, frequency analysis etc.

Question S2

What type of agreement has been achieved sofar between experiments and simulations (if applicable) ? Please include a brief description of the main problems encountered during the simulation.

Question S3

What type of mathematical formalism/framework do you typically use to describe the systems of interest (ODEs, complementarity systems, hybrid models, differential inclusions etc) ?

THANK YOU !!!