



Project no. 501986
Project acronym SIGMEA
SIGMEA Sustainable Introduction of GM Crops into European
Agriculture

Instrument: **STREP**

Thematic Priority: **FP6-2002-SSP1 (Policy Oriented Research)**

Deliverable 10.1.1
Workshop on decision support system

Due date of deliverable: January 2005
Actual submission date: January 2005

Start date of project: **3 May 2004**

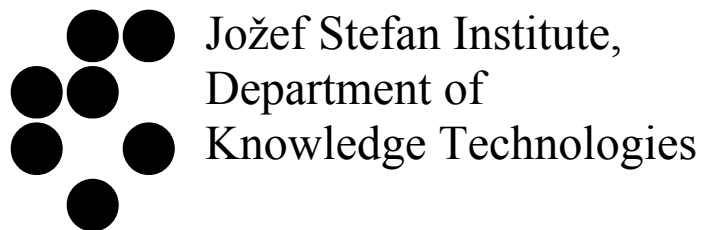
Duration: **42 months**

Organisation name of lead contractor for this deliverable: **JSI**

Revision [1]

Project co-funded by the European Commission within the Sixth Framework Programme (2002-2006)		
Dissemination Level		
PU	Public	
PP	Restricted to other programme participants (including the Commission Services)	X
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

(content available upon request)



Data Mining and Decision Support for Environmental Applications

Introductory course for SIGMEA partners
Lecture notes

Sašo Džeroski and Marko Bohanec

Ljubljana, January 2005

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Handouts	Video (available on DVD support only)
• Environmental applications of machine learning: An overview	saso_dzeroski1.wmv @ 0:07:30
• An introduction to data mining and knowledge discovery in databases	saso_dzeroski1.wmv @ 1:17:00 and saso_dzeroski_2.wmv @ 0:00:00
• Induction of decision trees (classification and regression trees)	saso_dzeroski_2.wmv @ 0:04:50
• Environmental applications of decision trees	saso_dzeroski_2.wmv @ 0:38:00
• Decision support, multi-attribute decision modelling, and DEXi	marko_bohanec_1.wmv @ 0:00:00 and marko_bohanec_2.wmv @ 0:00:00
• Integrating data mining and decision support: The ECOGEN experience	

Supplementary reading

- Dzeroski, S. (2001) Data mining in a nutshell. In S. Dzeroski and N. Lavrač, editors, Relational Data Mining, pages 3–27. Springer, Berlin.
- Dzeroski, S. (2002) Applications of KDD methods in environmental sciences. In W. Kloesgen and J. Zytow, editors, Handbook of Data Mining and Knowledge Discovery, pages 817–830. Oxford University Press.
- Kampichler, C., Dzeroski, S., and Wieland, R. (2000) Application of machine learning techniques to the analysis of soil ecological data bases: relationships between habitat features and Collembolan community characteristics. Soil Biology and Biochemistry, 32: 197–209.
- Bohanec, M. (2001) What is decision support?, Proc. Information Society IS-2001: Data Mining and Decision Support in Action! (eds. Škrjanc, M., Mladenič, D.), Ljubljana, 86-89
- Bohanec, M., and Rajkovič, V. (1999) Multi-attribute decision modelling: Industrial applications of DEX. Informatica (Ljubljana, Slovenia), 23: 487–491.

• Demšar, D., Džeroski, S., Krogh, P.-H., and Larsen, T. (2004) Discovering the most important factors for communities of soil microarthropods using machine learning. In SHRING : Proceedings of the 18th International Conference Informatics for Environmental Protection, EnviroInfo Geneva 2004, pages 194-204. Editions du Tricorne, Geneve.

• Bohanec, M., Džeroski, S., Žnidaršič, M., Messean, A., Scatasta, S., and Wesseler, J. (2004) Multi-attribute modelling of economic and ecological impact of cropping systems. Informatica (Ljubljana, Slovenia), 28: 387–392.

Software

Program

Link

Weka for windows (without java installed)

[weka-3-4-4jre.exe](#)

Weka for windows with java jre installed

[weka-3-4-4.exe](#)

[Weka hands on exercises video saso_dzeroski_2.wmv @ 0:51:25](#)

Weka for other operating systems (java must be installed)

[weka-3-4-4.zip](#)

Dexi for windows

[DEXi_ENG.zip](#)

Acrobat reader (english)

[AdbeRdr60_DLM_enu_full.exe](#)