

**NCSR “DEMOKRITOS”**

**INSTITUTE OF INFORMATICS &  
TELECOMMUNICATIONS**

**PERIOD REPORT  
2000 - 2004**

**Aghia Paraskevi, June 2000**

## OVERVIEW



### Personnel

Type of personnel	2000	2001	2002	2003	2004
Researchers A	5	4	4	3	3
Researchers B	4	4	5	6	6
Researchers C	2	2	1	3	3
Researchers D					
<b>Total number of Researchers</b>	<b>11</b>	<b>10</b>	<b>10</b>	<b>12</b>	<b>12</b>
Functional Scientific Personnel	3	3	3	3	3
Visiting researchers					
Post-doc researchers	4	4	3	4	3
Scientists & engineers under research training	33	25	12	16	9
Technical personnel	26	34	23	18	24
Administrative personnel	3	7	5	4	4
Auxiliary personnel					
Other (PART TIME)					20
<b>TOTAL</b>	<b>80</b>	<b>83</b>	<b>56</b>	<b>57</b>	<b>75</b>

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## Scientific results

	2000	2001	2002	2003	2004	TOTAL
<b>Journals</b>	8	8	7	9	8	40
<b>Books/Editorials</b>	3	1	3	0	2	9
<b>Book Chapters</b>	3	6	2	6	11	28
<b>Fully Refereed Conference Proceedings</b>	26	25	21	29	42	143
<b>Partially Refereed Conference Proceedings</b>	1	8	6	8	4	27
<b>Total Publications</b>	41	48	39	52	67	247
<b>Citations (≥)</b>	85	123	128	117	101	554
<b>Presentations, Internal Reports</b>	15	12	16	17	16	76
<b>Project Technical Reports</b>	22	34	33	32	27	148
<b>PhD</b>	5	4	2	1	1	13
<b>Projects</b>	20	19	21	19	23	58

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## Projects in which IIT participated



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# Funds Raised

*IIT Income for the period 2000-2004 (in k€)*

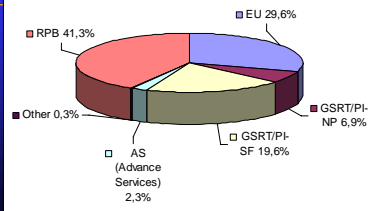
	2000	2001	2002	2003	2004	2000-2004	% 2000-2004
Income from the EU Framework Programmes (EU)	294,31	324,06	823,78	208,82	1.293,40	<b>2.944,37</b>	<b>29,6%</b>
Public investment funds - national projects & studies (GSRT/PI-NP)	432,32	45,94	64,96	46,34	93,04	<b>682,60</b>	<b>6,9%</b>
Public investment funds- structural funds (GSRT/PI-SF)	32,90	356,44	456,64	696,13	412,22	<b>1.954,34</b>	<b>19,6%</b>
Income from R&D contracted by firms and other private legal entities & Income from sales of products and services, studies, tests, etc to third parties (AS)	63,79	19,31	65,61	11,87	72,13	<b>232,72</b>	<b>2,3%</b>
Public investment funds- other funding (df)	0,00	12,59	14,85	0,00	0,00	<b>27,44</b>	<b>0,3%</b>
<b>Total Income from projects &amp; services</b>	<b>823,33</b>	<b>758,34</b>	<b>1.425,85</b>	<b>963,17</b>	<b>1.870,80</b>	<b>5.841,48</b>	<b>58,7%</b>
Regular public budget funding (R.P.B.F.)	<b>702,20</b>	<b>738,20</b>	<b>787,70</b>	<b>922,00</b>	<b>959,65</b>	<b>4.109,75</b>	<b>41,3%</b>
<b>Income total (in k€)</b>	<b>1.525,53</b>	<b>1.496,54</b>	<b>2.213,55</b>	<b>1.885,17</b>	<b>2.830,45</b>	<b>9.951,23</b>	<b>100%</b>
Partial Overhead used by NCSR	13,16	142,58	182,66	208,54	164,89	711,82	

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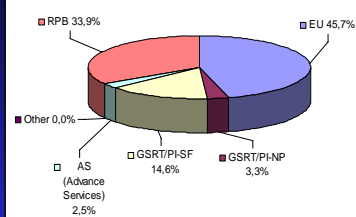
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# Funds Raised

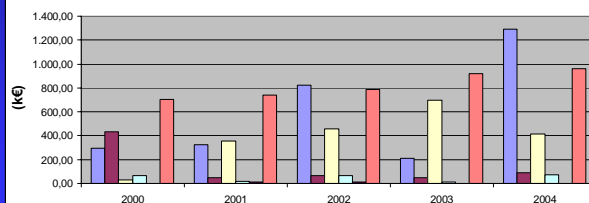
INCOME IIT 2000-2004



INCOME IIT 2004



IIT INCOME FOR THE PERIOD 2000-2004



- Income from the EU Framework Programmes (EU)
- Public investment funds - national projects & studies (GSRT/PI-NP)
- Public investment funds- structural funds (GSRT/PI-SF)
- Income from R&D contracted by firms and other private legal entities & Income from sales of products and services, studies, tests, etc to third parties (AS)
- Public investment funds- other funding (df)
- Regular public budget funding (R.P.B.F.)

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# INSTITUTE OF INFORMATICS & TELECOMMUNICATIONS

## **1.Publications**

### **COMPUTATIONAL INTELLIGENCE LABORATORY**

#### **JOURNALS**

##### **2000**

1. Perantonis S.J. and Virvilis V., Efficient perceptron learning using constrained steepest descent, *Neural Networks*, 13(3), 351-364, 2000.
2. Gatos B., Mantzaris S., Perantonis S.J. and Tsigris A., Automatic page analysis for the creation of a digital library from newspaper archives, *International Journal of Digital Libraries*, 3(1), 76-84, 2000.
3. Perantonis S.J., Ampazis N. and Virvilis V., A learning framework for neural networks using constrained optimization methods. *Annals of Operations Research*, 99, 385-401, 2000.

##### **2001**

4. Ampazis N., Perantonis S.J. and Taylor J.G., A dynamical model for the analysis and acceleration of learning in feedforward networks *Neural Networks*, 14(8), 1075-1088, 2001.

##### **2002**

5. Ampazis N. and Perantonis S.J., Two highly efficient second order algorithms for feed forward networks, *IEEE Transactions on Neural Networks*, 13(5), 1064-1074, 2002.
6. Antoniou G.E., Paraskevopoulos P.N. and Varoufakis S.J., 2-D quadratic continued fraction expandable systems: minimal state space realization, *Foundations of Computing and Decision Sciences*, 25(3), 149-159, 2002.

##### **2003**

7. Vanhamel I., Pratikakis I. and Sahli H., Multiscale Gradient Watersheds of Color Images, *IEEE Transactions on Image Processing*, 12(6), 617-626, 2003.
8. Pratikakis I., Barillot C., Hellier P. and Memin E., Robust Multiscale Deformable Registration of 3D Ultrasound Images, *International Journal of Image and Graphics – Special Issue on 3D Vision and Medical image Processing*, 3(4), 1-19, 2003.

##### **2004**

9. Gatos B., Papamarkos N., Andreadis I. and Perantonis S.J., Fast Implementation of Morphological Operations Using Image Block Decomposition. *International Journal of Image and Graphics*, 4(2), 183-202, 2004.
10. Ampazis N. and Perantonis S.J., LSISOM - A Latent Semantic Indexing Approach to Self-organizing Maps of Document Collections. *Neural Processing Letters*, 19(2), 157-173, 2004.

11. Petridis S. and Perantonis S.J., On the Relation between Discriminant Analysis and Mutual Information for Supervised Linear Feature Extraction. *Pattern Recognition*, 37(5), 857-874, 2004.
12. Perantonis S.J., Gatos B., Ntzios K., Pratikakis I., Vrettaros I., Drigas A., Emmanouilidis C., Kesidis A. and Kalomirakis D., A system for Processing and Recognition of Old Greek Manuscripts. *WSEAS Transactions on Computers*, 3(6), 2049-2057, 2004.
13. Perantonis S.J., Gatos B., Ntzios K., Pratikakis I., Vrettaros I., Drigas A., Emmanouilidis C., Kesidis A. and Kalomirakis D., Recognition of Old Greek Manuscripts”, *International Journal Information Theories & Applications (IJITA)*, 11(3), 232-240, 2004.

## **BOOKS/EDITORIALS**

### **BOOK CHAPTERS**

#### **2001**

1. Vassilas N., Kalapanidas E., Avouris N.M. and Perantonis S.J., Intelligent Techniques for Spatio-Temporal Data Analysis in Environmental Applications. In Georgios Paliouras, Vangelis Karkaletsis, Constantine D. Spyropoulos (Eds.): *Machine Learning and Its Applications, Advanced Lectures. Lecture Notes in Computer Science 2049*, 318-324, 2001.

#### **2003**

2. Charou E., Vassilas N., Perantonis S.J. and Varoufakis S.J., Intelligent Techniques in Environmental Data Processing. In Harmancioglu et al. (eds.), *Integrated Technologies for Environmental Monitoring and Information Production*, Kluwer Academic Publishers, pp. 301-310, 2003.

## **FULLY REFEREED CONFERENCE PROCEEDINGS**

#### **2000**

1. Agogino A., Ghosh J., Perantonis S.J., Petridis S. and Virvilis V., The role of multiple, linear-projection based visualization techniques in RBF-based classification of high-dimensional data, *Proceedings of IEEE & INNS International Joint Conference on Neural Networks, IJCNN 2000*, paper no. N0636, Como, Italy, 2000 (CD proceedings).
2. Ampazis N. and Perantonis S.J., Levenberg-Marquardt algorithm with adaptive momentum for the efficient training of feedforward networks, *Proceedings of IEEE & INNS International Joint Conference on Neural Networks, IJCNN 2000*, paper no. NN0401, Como, Italy, 2000 (CD proceedings).
3. Gatos B., Papamarkos N., Andreadis I. and Perantonis S.J., Applying morphological transformations on a block represented binary image, *Proceedings of the 4<sup>th</sup> International Workshop on Document Analysis Systems (DAS2000)*, 487-495, Rio de Janeiro, Brazil, December 2000.
4. Mantzaris S., Gatos B. and Perantonis S.J., Linking article parts for the creation of a newspaper digital library. *Proceedings of RIAO 2000*, 997-1005, Paris, France, 2000.

5. Perantonis S.J., Petridis S. and Virvilis V., Supervised principal components analysis using a smooth classifier paradigm, Proceedings of the 15<sup>th</sup> International Conference on Pattern Recognition, 2, 109-112, Barcelona, Spain, 2000.
6. Perantonis S.J., Ampazis N. and Spirou S., Training feed forward neural networks with the dogleg method and BFGS Hessian updates, Proceedings of IEEE & INNS International Joint Conference on Neural Networks, IJCNN 2000, paper no. NN0342, 1138-1145, Como, Italy, 2000, IEEE Computer Society Press.
7. Petasis G., Petridis S., Paliouras G., Karkaletsis V., Perantonis S.J., and Spyropoulos C.D., Symbolic and neural learning for named-entity recognition, Proceedings of the Symposium on Computational Intelligence and Learning (COIL), 58-66, Chios, Greece, 2000.

## **2001**

8. Vassilas N., Perantonis S.J., Virvilis V., Papageorgiou Ch., Rabavilas A. and Christodoulou G.N., Multimodular ERP classification using neural network based feature selection. Proceedings of the IASTED International Conference: Artificial Intelligence and Applications, 26-29, Marbella, Spain, 4-7 September 2001.

## **2002**

9. Ampazis N. and Perantonis S.J., Evaluation of dimensionality reduction techniques for SOM clustering of textual data. Proceedings of the second IASTED Conference on Artificial Intelligence and Applications, 216-221, Malaga, Spain, 2002.
10. Vassilas N., Perantonis S.J., Charou E., Tsenoglou Th., Stefouli M. and Varoufakis S.J., Delineation of lineaments from Satellite data based on Efficient Neural Network and Pattern Recognition Techniques, In 2nd Hellenic Conference on Artificial Intelligence SETN02, 355-365, Thessaloniki, Greece, April 2002.
11. Stefouli M., Charou E., Zogalis Y. and Gouremen M., Spatiotemporal analysis of satellite images for automatic extraction of Geo-environmental parameters, Proceedings of 2<sup>nd</sup> Panhellenic Conference of the Hellenic Society of Geographical Information Systems, 376-385, Athens, February 2002.
12. Kosmopoulos D. and Chandrinou K. V., Definition and extraction of visual landmarks for indoor robot navigation, SETN02, 401-412, Thessaloniki, 2002.

## **2003**

13. Perantonis S.J., Gatos B. and Maragos V., A Novel Web Image Processing Algorithm for Text Area Identification that Helps Commercial OCR Engines to Improve Their Web Image Recognition Efficiency, Proc. of the Second International Workshop on Web Document Analysis (WDA2003), 61-64, Edinburgh, Scotland, August 2003.
14. Antonacopoulos A., Gatos B. and Karatzas D., ICDAR 2003 Page Segmentation Competition, Proc. of the 7th International Conference on Document Analysis and Recognition (ICDAR'03), 688-692, Edinburgh, Scotland, August 2003.
15. Perantonis S.J., Neural Networks: Nonlinear Optimization for Constrained Learning and its Applications, Invited talk, Proceedings of NOLASC 2003, 589-594, Vouliagmeni, Greece, December 27-29, 2003.
16. Cutsuridis V., Computational Neural Modeling in Cognitive Neuroscience: Advantages and Problems, Proceedings of the Hellenic European Research on Computer Applications & Mathematics Symposium, Athens, Greece, September 25-27, 2003.

## **2004**

17. Gatos B., Ntzios K., Pratikakis I., Petridis S., Konidakis T. and Perantonis S. J., A segmentation-free recognition technique to assist old Greek handwritten manuscript OCR. IAPR Workshop on Document Analysis systems (DAS'2004), Lecture Notes in Computer Science (3163), 63-74, Florence, Italy, 2004.
18. Gatos B., Pratikakis I. and Perantonis S.J., An adaptive binarisation technique for low quality historical documents. IAPR Workshop on Document Analysis systems (DAS'2004), Lecture Notes in Computer Science (3163), 102-113, Florence, Italy, 2004.
19. Gatos B., Pratikakis I. and Perantonis S. J., Locating Text in historical collection manuscripts. 3rd Hellenic Conference on Artificial Intelligence, Lecture Notes in Artificial Intelligence (3025), 476-485, Samos, Greece, 2004.
20. Petridis S. and Perantonis S.J., Feature Deforming for Improved Similarity Based Learning, 3rd Hellenic Conference on Artificial Intelligence, Lecture Notes in Artificial Intelligence (3025), 201-209, Samos, Greece, 2004.
21. Gatos B., Perantonis S.J., Maragos V., Karkaletsis V. and Petasis G., Text Area Identification in Web Images, 3rd Hellenic Conference in Artificial Intelligence, Lecture Notes in Artificial Intelligence (3025), 82- 92, Samos, Greece, 2004.
22. Gatos B., Papamarkos N. and Perantonis S.J., Comparing Point and Block Representation in Computer Vision and Image Processing Tasks. 3rd Hellenic Conference on Artificial Intelligence, Samos, Greece, 217-226, 2004.
23. Charou E., Petridis S., Stefouli M., Mavrantza O.D., Perantonis, S.J., Innovative feature selection used in multispectral imagery classification for water quality monitoring, In XX<sup>th</sup> ISPRS Congress, 1354-1358, Istanbul, Turkey, July 2004.
24. Vafiadis G., Aggelopoulos C., Moulos V. and Pratikakis I., Pythagoras: A 3D Interactive Geometry learning environment, 3<sup>rd</sup> Hellenic Conference on Artificial Intelligence, 278-287, Samos, Greece, 2004.
25. Doulamis A., Kosmopoulos D., Christogiannis C., Varvarigou T., Polymnia: Personalised Leisure and Entertainment over Cross Media Intelligent Platforms, European Workshop on the Integration of Knowledge, Semantics and Digital Media Technology, 319-326, 2004.
26. Stefouli M., Dimitrakopoulos D., Papadimitrakis J. and Charou E., Monitoring and Assessing Internal Waters (Lakes), Using Operational Space Born Data and Field Measurements, European Water Resources Association Symposium on Water resources management, 755-767, Izmir, Turkey, September 2004.
27. Makris I. and Pratikakis I., PROTEIN: A Procedural Texture Authoring tool, 3<sup>rd</sup> Hellenic Conference on Artificial Intelligence, 2880297, Samos, Greece, 2004.
28. Pratikakis, I. Vanhamel, H, Sahli, Z. Efraimidis, Gatos B. and Perantonis S.J., Unsupervised Region-Based Image Retrieval, IEE European Workshop on the Integration of Knowledge, Semantic and Digital Media Technologies, 39-46, London, UK, 2004.

## **PARTIALLY REFEREED CONFERENCE PROCEEDINGS**

### **2000**

1. Stefouli M., Charou E., Vaiopoulos D. and Varoufakis S.J., Satellite image interpretation using modern information processing technologies, Proceedings of the Symposium on Space Applications and the Environment, pp. 34-39, Aigira, Greece 2000.



## 2001

2. Vassilas N, Stefouli M., Vaiopoulos D., Charou E. and Varoufakis, S.J., Processing and classification of lithological units from satellite images using neural networks, Proceedings of 1<sup>st</sup> International Conference “Space Applications and the Environment”, 124-131, Voula, Greece, October-November 2001.
3. Perantonis S.J., Ampazis N., Virvilis V. and Petridis S., Open issues in feed forward neural network training, Proceedings of LFTNC2001, Siena, Italy, October 2001.

## 2003

4. Petridis S., Charou E. and Perantonis S.J., Non Redundant Feature Selection of Multiband Remotely Sensed Images for Land Cover Classification, Proc. Tyrrhenian International Workshop on remote sensing, 657-666, Elba, Italy, September 2003.
5. V. Cutsuridis, I. Evdokimidis, I. Kahramanoglou, S.J. Perantonis and N. Smyrnis, A Neural Model of Eye Movement Behavior in an Antisaccade Task: Validation by Comparison from 2006 Normal Individuals, Society for Neuroscience Conference, New Orleans, USA, November 8-12, Pr. No. 72.13, 2003.
6. Cutsuridis V., Evdokimidis I., Kahramanoglou I., Perantonis S.J. and Smyrnis N., A Neural Network Model of Antisaccadic Movement Behavior, Proceedings of the 18<sup>th</sup> Conference for the Hellenic Society for Neuroscience, Poster 6, Athens, Greece, October 2003.
7. Cutsuridis V., A neural network model of normal and Parkinsonian EMG activity of fast arm movements, Proceedings of the 18<sup>th</sup> Conference of Hellenic Society for Neuroscience, Poster 7, Athens, Greece, October 2003.
8. **Marmarinos A. and Charou E., The contribution of traditional community’s ritual behavior and contemporary ecological movements for a sustainable natural environment, 2<sup>nd</sup> International Conference on Ecological Protection of the planet earth, Bio-environment and Bio-culture, 5-8 June 2003, National Palace of Culture, Sofia, Bulgaria, 645-648, 2003.**

## 2004

9. Stefouli M. and Charou E., Environmental Monitoring Using Earth Observation Data and WebGis Techniques, 1<sup>st</sup> Mediterranean Conference on Earth Observation, 365-371, Belgrade, Serbia and Montenegro April 2004.

## **TECHNICAL REPORTS**

### **INTERNAL TECHNICAL REPORTS**

### **ANNOUNCEMENTS-PRESENTATIONS**

## 2000

1. Perantonis S.J., Neural Networks and Applications, Talk delivered at the 2000 NCSR Summer School, NCSR “Demokritos”, July 2000.
2. Perantonis S.J., The Role of Information Technologies for the Preservation of our Cultural Heritage, Talk delivered at an exhibition organized by GSRT, 2000.
3. Charou E., Geoscientific Applications of Neural Networks, Talk delivered in the framework of the Interdepartmental postgraduate programme on Oceanography, 2000.

4. Marmarinos A., Stefouli M. and Charou E., The Sacred Places of Cythera-Seismic Venturousness Analysis, Talk given at the 1<sup>st</sup> International Conference of Surveys on Cythera, Cythera 2000.

#### **2001**

5. Charou E., Applications of Neural Networks in Remote Sensing, Talk delivered in the framework of the Interdepartmental Postgraduate Programme on Oceanography, 2001.
6. Charou E., Neural Networks and Applications, Talk delivered at the 2001 IIT Summer School, NCSR "Demokritos", July 2001.

#### **2002**

7. Perantonis S.J., Neural Networks and Applications, Talk delivered at the 2002 IIT Summer School, NCSR "Demokritos", July 2002.
8. Perantonis S.J., Artificial Neural Networks-Biological Ancestry and Computational Aspects, Talk delivered at the Department of Psychophysiology, University of Athens, 2002.
9. Perantonis S.J., Artificial Neural Networks and their Application to Data Analysis, Talks delivered in the framework of IIT e-learning seminar series, November 2002.
10. Charou E., Environmental Informatics, Talk delivered at the 2002 IIT Summer School, NCSR "Demokritos", July 2002.
11. Charou E., Environmental Informatics, Talks delivered in the framework of IIT e-learning seminar series, November 2002.
12. Charou E., Invited participation at the Workshop for Remote Sensing, Agriculture and the Environment, organized by OECD and Gaia Environmental Center, Athens, 17-20 September 2002.

#### **2003**

13. Pratikakis I., Content Based Image Retrieval, Talk delivered at the 2003 IIT Summer School, NCSR "Demokritos", July 2003.
14. Gatos B., Digital Document Processing, Talk delivered at the 2003 IIT Summer School, NCSR "Demokritos", July 2003.
15. Charou E., Environmental Informatics, Talk delivered at the 2003 IIT Summer School, NCSR "Demokritos", July 2003.
16. Perantonis S.J., Computational Intelligence and Applications, Talk delivered at the 2003 IIT Summer School, NCSR "Demokritos", July 2003.

#### **2004**

17. Gatos B., Document Analysis and Recognition, Talk delivered at 2<sup>nd</sup> Training Seminar of Multi-Mine Network, NCSR "Demokritos", 15-24 March 2004.
18. Perantonis S.J., Computational Intelligence and Applications, Talk delivered at 2<sup>nd</sup> Training Seminar of Multi-Mine Network, NCSR "Demokritos", 15-24 March 2004.
19. Perantonis S.J., Digitization, Processing and Recognition of Old Greek Manuscripts, Talk delivered at International Seminar on Digitisation of Cultural and Scientific Heritage, Bansko, Bulgaria, 29-31 August 2004.
20. Charou E., Geoscientific Applications of Intelligent Computational Methods, Talk delivered in the framework of the Interdepartmental Postgraduate Programme on Oceanography, 2004.

21. Maglogiannis I., Kosmopoulos D.I., Artificial Intelligence Tools for the Characterization of Digital Images Containing Pigmented Skin Lesions: An Application for the Detection of Malignant Melanoma, 9th World Congress on Advances in Oncology, Crete, Greece, 2004.

## **POPULARIZATION ARTICLES/MEDIA PRESENTATIONS**

# SOFTWARE & KNOWLEDGE ENGINEERING LABORATORY

## JOURNALS

### 2000

1. M. Gergatsoulis, P. Rondogiannis, Th. Panayiotopoulos “Temporal Disjunctive Logic Programming” *New Generation Computing*, 19(1), pp. 87-100, December 2000.
2. C.D. Spyropoulos, “AI planning and scheduling in the medical hospital environment”. *Journal of Artificial Intelligence in Medicine*, 20(2), pp. 101-111, October 2000.
3. C. Marinagi, C.D. Spyropoulos, C. Papatheodorou and S. Kokkotos, “Continual planning and scheduling for managing patient tests in hospital laboratories”. *Journal of Artificial Intelligence in Medicine*, 20(2), pp. 139-154, October 2000.

### 2001

4. P. Rondogiannis, M. Gergatsoulis “The Branching-time Transformation Technique for Chain Datalog Programs” *Journal of Intelligent Information Systems*, 17(1), pp. 71-94, November 2001.
5. Th.Mitakos, M.Gergatsoulis, Y.Stavrakas, E.V.Ioannidis. Representing Time-Dependent Information in Multidimensional XML. *Journal of Computing and Information Technology (CIT)*, 9(3), pp. 233-238, September 2001.

### 2002

6. G. Paliouras, C. Papatheodorou, V. Karkaletsis and C.D. Spyropoulos, “Discovering User Communities on the Internet Using Unsupervised Machine Learning Techniques”, *Interacting with Computers*, 14(6), pp. 761-791, 2002.

### 2003

7. D. Pierrakos, G. Paliouras, C. Papatheodorou and C.D. Spyropoulos, “Web Usage Mining as a tool for personalization: a survey,” *User Modeling and User-Adapted Interaction*, 13(4), pp. 311-372, November 2003.
8. G. Sakkis, I. Androutsopoulos, G. Paliouras, V. Karkaletsis, C.D. Spyropoulos and P. Stamatopoulos, “A Memory-Based Approach to Anti-Spam Filtering for Mailing Lists,” *Information Retrieval*, 6(1), pp. 49-73, 2003.
9. A. Isard, J. Oberlander, I. Androutsopoulos and C. Matheson, "Speaking the Users' Languages". *IEEE Intelligent Systems*, 18(1), pp. 40-45, 2003.

### 2004

10. G. Petasis, G. Paliouras, V. Karkaletsis, C. Halatsis, and C.D. Spyropoulos, “e-GRIDS: Computationally Efficient Grammatical Inference from Positive Examples”. *GRAMMARS*, (7) 2004, pp. 69-110, (<http://www.grammars.grlmc.com/special.asp>).

## BOOKS/EDITORIALS

### 2000

1. M. Gergatsoulis, P. Rondogiannis (editors) “Intensional Programming II”. World Scientific, 2000. (ISBN 981-02-4095-3).

2. K.V. Chandrinou, I.Cepulkauskaitė, V.Limanauskienė, G.Navickas, B.Smolka, and P.Vasarhelyi. Courseware for Training of Trainers and Users on the special applications of Internet-based services in the fields of cultural education, UNESCO (<http://protenis.mch.mii.lt/UNESCOeducation/>)
3. Spyropoulos C.D., Guest Editor, "Planning and Scheduling in the Hospital", Artificial Intelligence in Medicine (AIM), vol 20, issue 2, October 2000

#### **2001**

4. G. Paliouras, V. Karkaletsis and C.D. Spyropoulos (editors), Machine Learning and Applications. Lecture Notes in Computer Science, n. 2049, Springer-Verlag, 2001.

#### **2002**

5. I. Vlahavas and C.D. Spyropoulos (editors), "Methods and Applications of Artificial Intelligence", Lecture Notes in Artificial Intelligence (LNAI) no. 2308, Springer – Verlag, April 2002.
6. I. Vlahavas and C.D. Spyropoulos (editors), Proceedings Companion Volume of 2nd Hellenic Conference on AI (SETN-02), April 2002.
7. I. Androutsopoulos, Exploring Time, Tense and Aspect in Natural Language Database Interfaces, John Benjamins

#### **2004**

8. G. Paliouras, Y. Sakakibara (editors), Grammatical Inference: Algorithms and Applications. Proceedings of the 7<sup>th</sup> International Colloquium on Grammatical Inference (ICGI). Lecture Notes in Artificial Intelligence, n. 3264, Springer Verlag, 2004

### **BOOK CHAPTERS**

#### **2000**

1. I. Androutsopoulos and G.D. Ritchie, "Database Interfaces". In R. Dale, H. Moisl, and H. Somers (Eds.), Handbook of Natural Language Processing, chapter 9, pp. 209-240, Marcel Dekker Inc., 2000.

#### **2001**

2. G. Petasis, S. Petridis, G. Paliouras, V. Karkaletsis, S. Perantonis, and C.D. Spyropoulos, "Symbolic and Neural Learning of Named-Entity Recognition and Classification Systems in Two Languages," In Advances in Computational Intelligence and Learning: Methods and Applications, H-J. Zimmermann, G. Tselentis, M. van Someren and G. Dounias (eds), Kluwer Academic Publishers, pp. 193-210, 2001.
3. H. Jessen and G. Paliouras, "Data Mining in Economics, Marketing and Finance," In Machine Learning and Applications, G. Paliouras, V. Karkaletsis and C.D. Spyropoulos (eds), Lecture Notes in Computer Science, n. 2049, pp. 303-307, Springer-Verlag, 2001.
4. M. Gergatsoulis "Temporal and modal logic programming languages" Encyclopedia of Microcomputers, Allen Kent and James G. Williams (Executive Editors), Volume 27, Supplement 6, pages 393-408, Marcel Dekker, Inc. New York, 2001.

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29. Κ. Χανδρινός "Web Portals for Cultural Heritage", 3-day invited course during the summer school Electronic Publishing for Cultural Heritage, Sofia, 23-25 September 2002.

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2. ΝΕΑ, αφιέρωμα στο Διαδίκτυο, Σάββατο 15 Μαρτίου 2003, Σ. Κρίκης
3. Η ΚΑΘΗΜΕΡΙΝΗ e-Business, δημοσίευμα το Σάββατο 1 Νοεμβρίου 2003, Θέμα: Ελευθερία λόγου στο Διαδίκτυο με ισχυρά «φίλτρα»
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5. FilteriX: Ελληνικό Έξυπνο φίλτρο για το Internet, Infosec, Τεύχος 20, Φεβρουάριος 2004
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#### 2002

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### FULLY REFEREED CONFERENCE PROCEEDINGS

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2. S. Thomopoulos, WIN Technical Review, Μάρτιος 2002, IST-1999-20947

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## **ANNOUNCEMENTS-PRESENTATIONS**

### **2002**

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2. Θωμόπουλος Σ.Χ.Α., Μοσχότη Μ. Μάνια, Ψύχα Κέλλυ, Παπάζογλου Αλεξάνδρα, Παπανικολάου Χ., Ψαλίδας Αργύρης, «Εξ Αποστάσεως Εκπαίδευση στο Σχολείο: Αναγκαιότητα ή Τάση», 8ο Συνέδριο Ένωσης Ελλήνων & Κυπρίων Φυσικών, Πύλος, Ελλάς, 17 –19 Ιανουαρίου, 2003.

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# MANAGEMENT OF QUALITY STANDARDS Project

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### 2002

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**INSTITUTE OF INFORMATICS AND  
TELECOMMUNICATIONS**  
**NCSR "Demokritos"**  
**2. PROJECTS FUNDED 2000-2004**

**COMPUTATIONAL INTELLIGENCE LABORATORY**

<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short description</i>
1.	<p><b><u>Funding Organization:</u></b> General Secretariat of Research and Technology</p> <p><b><u>Contract no:</u></b> <b><u>Program:</u></b> EPAN, Action: 4.5.1</p> <p><b><u>Internal Account</u></b> <b><u>Department No:</u></b> 1106</p> <p><b>Partner</b></p>	<p><b><u>Title:</u></b> System for Digitisation and Processing of Greek Manuscripts (D-SCRIBE)</p> <p><b><u>Responsible:</u></b> S. Perantonis</p> <p><b><u>Budget of NCSR «D»:</u></b> 147.390,00</p> <p><b><u>Total Budget :</u></b> 1.016.415.00</p> <p><b><u>Starting Date:</u></b> 01/09/2003</p> <p><b><u>Duration:</u></b> 30 months</p> <p><b><u>URL:</u></b> <a href="http://iit.demokritos.gr/cil/dscribe/index.htm">http://iit.demokritos.gr/cil/dscribe/index.htm</a></p>	<p>The objective of this project is the development of an integrated system for management and processing of old Greek manuscripts. The system includes tools for the indexing and recognition of texts from the early Christian period, as well as educational software for training of paleographers in reading and interpretation of the old manuscripts.</p>
2.	<p><b><u>Funding Organization:</u></b> General Secretariat of Research and Technology</p> <p><b><u>Contract no:</u></b> GSRT 433</p> <p><b><u>Program:</u></b> EPAN, Action: 4.3.6.1, Greek- Turkish collaboration</p> <p><b><u>Internal Account</u></b> <b><u>Department No:</u></b> 1019</p> <p><b>Coordinator</b></p>	<p><b><u>Title:</u></b> The natural environment and the anthropogenic effects in internal waters - Integrated methods of follow-up and estimate of pollution repercussions. (INTERWATPOL)</p> <p><b><u>Responsible:</u></b> E Charou</p> <p><b><u>Budget of NCSR «D»:</u></b> 15.407,00</p> <p><b><u>Total Budget :</u></b>30.813,00</p> <p><b><u>Starting Date:</u></b> 31/03/2003</p> <p><b><u>Duration:</u></b> 24 months</p> <p><b><u>URL:</u></b> <a href="http://www.iit.demokritos.gr/cil/projects/cil_prj_interwatpol.htm">http://www.iit.demokritos.gr/cil/projects/cil_prj_interwatpol.htm</a></p>	<p>The objective of this project is the development and application of integrated methods of management with regard to the rapidly altered internal waters (lakes) with the help of satellite data, field measurements and by using intelligent techniques and mathematical models.</p>
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short description</i>

3.	<p><b><u>Funding Organization:</u></b> EC  <b><u>Contract no:</u></b> MTKD-CT--2004-509754  <b><u>Program:</u></b> Marie Curie Host Fellowships for the Transfer of Knowledge  <b><u>Internal Account</u></b>  <b><u>Department No:</u></b> 1090</p> <p><b>Partner</b></p>	<p><b><u>Title:</u></b> Knowledge Transfer for Digitisation of Cultural and Scientific Heritage in Bulgaria (KT-DIGICULT-BG)  <b><u>Responsible:</u></b> S. Perantonis  <b><u>Budget of NCSR «D»:</u></b> 4.900,00  <b><u>Total Budget :</u></b>  <b><u>Start Date:</u></b> 01/06/2004  <b><u>Duration:</u></b> 36 months  <b><u>URL:</u></b></p>	<p>The objective of this project is the transfer of know-how, from European institutions that are active in the digitization processing and presentation of monuments of cultural heritage with final aim the creation of a digitisation centre in Bulgaria. NCSR Demokritos is one of these institutions and will transfer its knowhow on digitization and processing of old manuscripts. The work includes exchanges between European countries and Bulgaria so that we achieve an optimal transfer of know-how for the fulfilment of this objective.</p>
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short description</i>
4.	<p><b><u>Funding Organization:</u></b> EC  <b><u>Contract no:</u></b> 2003-03-3.4-I-091  <b><u>Program:</u></b> INTERREG III B MEDITERRANEE OCCIDENTALE  <b><u>Internal Account</u></b>  <b><u>Department No:</u></b> 1182</p> <p><b>Partner</b></p>	<p><b><u>Title:</u></b> Processing and presentation of information on the transport networks and the uses of land of Mediterranean countries (TECHNOLANGUE)  <b><u>Responsible:</u></b> S. Perantonis  <b><u>Budget of NCSR «D»:</u></b>174.000,00  <b><u>Total Budget:</u></b> 2.252.000  <b><u>Start Date:</u></b> 01/06/2004  <b><u>Duration:</u></b> 25 months  <b><u>URL:</u></b>  <a href="http://www.technolanguerojet.org/">http://www.technolanguerojet.org/</a></p>	<p>The objective of this project is the development of interactive maps, network-based GIS and a portal that will unify the description of land use data and the transport networks of countries of the Mediterranean Emphasis is given on a unified description language for the data that will facilitate situation assessment and planning for viability and sustainable development.</p>
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short description</i>
5.	<p><b><u>Funding Organization:</u></b> EC  <b><u>Contract no:</u></b> EL/04/B/F/PP-148269  <b><u>Program:</u></b> Leonardo da Vinci  <b><u>Internal Account</u></b>  <b><u>Department No:</u></b> 1194</p> <p><b>Coordinator</b></p>	<p><b><u>Title:</u></b> Virtual Medical School and e-learning Framework (E-Medi)  <b><u>Responsible:</u></b> S. Perantonis  <b><u>Budget of NCSR «D»:</u></b>200.000,00  <b><u>Total Budget:</u></b> 666.443,00  <b><u>Start Date:</u></b> 01/10/2004  <b><u>Duration:</u></b> 30 months  <b><u>URL:</u></b>  <a href="http://iit.demokritos.gr/cil/e-MedI/index.htm">http://iit.demokritos.gr/cil/e-MedI/index.htm</a></p>	<p>The objective of this work is to introduce innovative methods of training and the environment of training that will help to bridge the gap between the availability of specially trained radiology professionals and the current needs in Europe. The program will focus on data from mammographies, X-rays and MRI scans, but the results can be extended itself easily to other image types. The proposed work aims at creating the products and the services that will incorporate all the state-of-the-art techniques in e-learning. Emphasis will be placed on the efficient demonstration and processing of images with the possibility for the direct incorporation of images with the notes, the text, the measurements of length, free tools, even voice memos, creating accordingly rich multimedia content close to the real clinical cases.</p>
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short description</i>



6	<p><b><u>Funding Organization:</u></b> EC <b><u>Program:</u></b> Socrates &amp; Youth</p> <p><b>Partner</b></p>	<p><b><u>Title:</u></b> Collaboration Atlantique Mediterranee</p> <p>AntiDopage</p> <p><b><u>Responsible:</u></b> Dr. S. Varoufakis <b><u>Budget of NCSR</u></b> <b><u>«D»:</u></b>23.000,00 <b><u>Total Budget:</u></b> 85.000,00 <b><u>Start Date:</u></b> 10/2001 <b><u>Duration:</u></b> 14 months <b><u>URL:</u></b> <a href="http://iit.demokritos.gr/cil/camad/index.htm">http://iit.demokritos.gr/cil/camad/index.htm</a></p>	<p>The objective of this project was to use multimedia methods for informing young people on the dangers of drugs and doping substances. An interactive CD enriched with videos and sound was created and distributed to various relevant institutions in Europe.</p>
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short description</i>
7.	<p><b><u>Funding Organization:</u></b> Greek Secretariat of Research and Technology <b><u>Program:</u></b> Program for the Support of Research Potential</p> <p><b>Partner</b></p>	<p><b><u>Title:</u></b> Automated Estimation of the Biological Quality of Soils <b><u>Responsible:</u></b> S. Varoufakis <b><u>Budget of NCSR</u></b> <b><u>«D»:</u></b>5.000,00 <b><u>Total Budget :</u></b> 48.000,00 <b><u>Start Date:</u></b> 1-1-1999 <b><u>Duration:</u></b> 24 months <b><u>URL:</u></b> <a href="http://iit.demokritos.gr/cil/BIOSOILS/index.htm">http://iit.demokritos.gr/cil/BIOSOILS/index.htm</a></p>	<p>The objective of this project was the development and implementation of new computer vision techniques for the automated estimation of the bioecological quality of soils. The methodology developed is based on relating the micromorphology of the soil with its biochemical characteristics. Its final goal was the development of a system for the recognition of characteristics relevant to the soil quality by computer processing of soil section images.</p>
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short description</i>
8.	<p><b><u>Funding Organization:</u></b> Greek Secretariat of Research and Technology <b><u>Contract no:</u></b> 97BE323 <b><u>Program:</u></b> Program for the Advancement of Industrial Research (PAVE) <b><u>Internal Account</u></b> <b><u>Department No:</u></b> 574 <b>Partner</b></p>	<p><b><u>Title:</u></b> Intelligent Camera for Texture Recognition <b><u>Responsible:</u></b> S. Perantonis <b><u>Budget of NCSR «D»:</u></b> 16.541,00 <b><u>Total Budget:</u></b> 66.541,00 <b><u>Start Date:</u></b> 1/10/1999 <b><u>Duration:</u></b> 21 months <b><u>URL:</u></b> <a href="http://iit.demokritos.gr/cil/">http://iit.demokritos.gr/cil/</a></p>	<p>The objective of this project was to develop and test intelligent image processing and pattern recognition methods embedded in a digital camera, aiming at supporting tasks of quality control. Combination of feature selection and extraction techniques based on texture were implemented. For the classification stage, a multiclassifier approach was followed, based on neural networks, fuzzy logic and statistical</p>

			techniques.
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short description</i>
9.	<p><b><u>Funding Organization:</u></b> NCSR DEMOKRITOS - Special Account <b><u>Contract no:</u></b> 010/1/8226B/20.11.98 <b><u>Program:</u></b> DHMOEREYNA <b><u>Internal Account</u></b> <b><u>Department No:</u></b> 613</p> <p><b>Coordinator</b></p>	<p><b><u>Title:</u></b> Face recognition using biometric methods <b><u>Responsible:</u></b> S. Perantonis <b><u>Budget of NCSR «D»:</u></b> 10.800,00 <b><u>Total Budget:</u></b> 10.800,00 <b><u>Start Date:</u></b> 01/04/1999 <b><u>Duration:</u></b> 24 months <b><u>URL:</u></b> <a href="http://iit.demokritos.gr/cil/">http://iit.demokritos.gr/cil/</a></p>	<p>The objective of this project was to develop and test methods for face recognition. Various methods for feature extraction pertaining to face recognition tasks were considered, including eigenfaces and a novel supervised eigenfaces method. Web-based applications of face recognition were designed and implemented.</p>
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short description</i>
10.	<p><b><u>Funding Organization:</u></b> Lambrakis Press Organization <b><u>Program:</u></b> Industrial research, subcontracting <b><u>Internal Account</u></b> <b><u>Department No:</u></b> 574</p> <p><b>Coordinator</b></p>	<p><b><u>Title:</u></b> Advanced OCR methods for digital newspaper archives  DIGINEWS  <b><u>Responsible:</u></b> S. Perantonis  <b><u>Budget of NCSR «D»:</u></b> <b><u>Total Budget:</u></b> <b><u>Start Date:</u></b> 01/04/1999 <b><u>Duration:</u></b> 24 months <b><u>URL:</u></b> <a href="http://iit.demokritos.gr/cil/">http://iit.demokritos.gr/cil/</a></p>	<p>The objective of this project was the development and testing of methodologies for the digital preservation of old newspapers. The project involved methods for enhancing old newspaper images, for automatic segmentation of the digital newspaper images in order to locate and store specific articles and for improving optical character recognition results, thus contributing towards the implementation of a digital newspaper library</p>
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short description</i>
11.	<p><b><u>Funding Organization:</u></b> Milward Brown UK Ltd, Initiative Media <b><u>Contract no:</u></b> 015/701/14.98/6-5-99 <b><u>Program:</u></b> Industrial research, subcontracting <b><u>Internal Account</u></b> <b><u>Department No:</u></b> 663</p> <p><b>Coordinator</b></p>	<p><b><u>Title:</u></b> Data modelling- Information extraction using computational learning  <b><u>Responsible:</u></b> S. Perantonis <b><u>Budget of NCSR «D»:</u></b> 11.500,00</p>	<p>The objective of this project was to provide advanced data modelling services using computational learning techniques. In the framework of this project services concerning econometric data modelling using neural networks were provided to Milward Brown and</p>

		<u>Total Budget:</u> 11.500,00 <u>Start Date:</u> 05/1999 <u>Duration:</u> 5 years <u>URL:</u> <a href="http://iit.demokritos.gr/cil/">http://iit.demokritos.gr/cil/</a>	Initiative Media market research agencies.
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short description</i>
12.	<u>Funding Organization:</u> Municipality of Athens-DAEM <u>Contract no:</u> 015/701/1.2004/17-1-05 <u>Program:</u> Industrial research, subcontracting  <u>Internal Account</u> <u>Department No:</u> 1214 <b>Coordinator</b>	<u>Title:</u> Advanced information processing services using computational intelligence  <u>Responsible:</u> S. Perantonis  <u>Budget</u> <u>NCSR «D»:</u> 50.000,00 <u>Project:</u> 50.000,00 <u>Start Date:</u> 01/12/2004 <u>Duration:</u> 3 years <u>URL:</u>	The objective of this project is to develop and provide specialised advanced information processing services and products to various public institutions and/or private companies. Up to know services concerning automated digital map production utilizing state-of-the-art GIS and WEBGIS technologies were provided to the Municipality of Athens.

<b>SOFTWARE &amp; KNOWLEDGE ENGINEERING LABORATORY</b>			
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
13.	<u>Funding Organization:</u> EC <u>Contract No:</u> SIAP, SIAP2003QL01 QUATRO/29097 <u>Programme:</u> SIAP <u>Internal Account</u> <u>Department No:</u> 1189  <b>Partner</b>	<u>Title:</u> Quality Assurance and Content Description (QUATRO) <u>Project Manager:</u> C.D. SPYROPOULOS <u>Budget of NCSR:</u> 118.519,00 € <u>Total Budget :</u> 738.313 € <u>Starting Date:</u> 1/11/2004 <u>Duration:</u> 24 months <u>URL:</u> <a href="http://quatro-project.org/">http://quatro-project.org/</a>	The Quatro project is applying semantic web technologies to trust-mark schemes and quality labels. Drawing on past and original research, the project has defined a vocabulary that can be used by any trust-mark scheme and a technical platform to deliver the trust-marks in a format that can be processed by semantic web agents.

<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
14.	<p><b><u>Funding Organization:</u></b> EC <b><u>Contract No:</u></b> 004218 <b><u>Programme:</u></b> FP6-IST “Applications &amp; Services for the Mobile User and Worker” <b><u>Internal Account</u></b> <b><u>Department No:</u></b> _1196</p> <p><b>Partner</b></p>	<p><b><u>Title:</u></b> Mobile support for rescue forces, integrating multiple modes of interaction (SHARE) <b><u>Project Manager:</u></b> G. PALIOURAS <b><u>Budget of NCSR:</u></b> 445.150,00 <b><u>Total Budget :</u></b> 4.783.950 € <b><u>Starting Date:</u></b> 1/11/2004 <b><u>Duration:</u></b> 36 months <b><u>URL:</u></b> _http://www.ist-share.org/</p>	<p>SHARE aims to develop a new type of advanced mobile service, called Push-To-Share, to support “mobile content sharing” by the participants of field operational teams, such as fire rescue forces. Push-To-Share is an innovative extension of the commonly used Push-To-Talk technology and provides a new concept for simple ways of complex communication, combining an easy-to-use interface with a comfortable delivery of multimedia content. Push-To-Share incorporates innovations in the area of multimodal interaction, robust speech interfaces, interactive digital maps, in conjunction with location-based services and intelligent information processing of multimedia data.</p>
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
15.	<p><b><u>Funding Organization:</u></b> GSRT <b><u>Contract No:</u></b> 03EΑΔ-6 <b><u>Programme:</u></b> EPAN, Action: 8.3.6 <b><u>Internal Account</u></b> <b><u>Department No:</u></b> 1070</p> <p><b>Partner</b></p>	<p><b><u>Title:</u></b> Human Network in Knowledge Management and Discovery Technologies from Multimedia Content (MULTI MINE) <b><u>Project Manager:</u></b> G. PALIOURAS <b><u>Budget of NCSR:</u></b> 16.842,10 <b><u>Total Budget ::</u></b> 180.000 € <b><u>Starting Date:</u></b> 10/05/2003 <b><u>Duration:</u></b> 24 months <b><u>URL:</u></b> http://www.multimine.gr</p>	<p>MULTIMINE aims at forming in Greece a group of research organisations and companies with expertise in the technologies of knowledge management and knowledge discovery from multimedia content. Its main research areas include:</p> <ul style="list-style-type: none"> <li>• Information Extraction from the Web</li> <li>• Knowledge Discovery from the Web</li> <li>• Knowledge Discovery from Corporate content</li> <li>• Exploitation of ontologies</li> <li>• Representation formats for meta-data and ontologies</li> <li>• Content based Indexing and Retrieval of image, video and 3D-graphics</li> <li>• Personalised access to content</li> </ul>
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
16.	<p><b><u>Funding Organization:</u></b> GSRT <b><u>Contract No:</u></b> <b><u>Programme:</u></b> 01 PRAXE 127 <b><u>Internal Account</u></b> <b><u>Department No:</u></b> 975</p> <p><b>Coordinator</b></p>	<p><b><u>Title:</u></b> 01 PRAXE 127: “e-Content Analysis” <b><u>Project Manager:</u></b> C.D. SPYROPOULOS <b><u>Budget of NCSR :</u></b> 30.000 € <b><u>Total Budget ::</u></b> 30.000 € <b><u>Starting Date:</u></b> 01/05/2002 <b><u>Duration:</u></b> 12 months <b><u>Extension till:</u></b> 30/10/2003 <b><u>URL:</u></b></p>	<p>The project aimed at preparing the commercial exploitation of our on-line content analysis technology. Combining techniques from the area of Artificial Intelligence (information extraction from multiple media, machine learning), through a carefully designed training process, it produces automatically models for filtering and semantic annotating documents.</p>

<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
17.	<p><b><u>Funding Organization:</u></b> EC <b><u>Contract No:</u></b> IAP-2001-2111 <b><u>Programme:</u></b> FP5-IAP <b><u>Internal Account</u></b> <b><u>Department No:</u></b> 930  <b>Partner</b></p>	<p><b><u>Title:</u></b> SIFT “Solution for Internet Content Filtering” <b><u>Project Manager:</u></b> C.D. SPYROPOULOS <b><u>Budget of NCSR :</u></b> 284.948 € <b><u>Total Budget ::</u></b> 900.000 € <b><u>Starting Date:</u></b> 01/01/2002 <b><u>Duration:</u></b> 18 months <b><u>URL:</u></b> <a href="http://www.sift-platform.org/">http://www.sift-platform.org/</a></p>	<p>Development of a platform based system that enables to integration of different filters according to the content rating system established by the Internet Content Rating Association (ICRA). Filterix is one of the filters that was examined in this platform.</p>
<i>Nr</i>	<i>Contract Details</i>	<i>Project Details</i>	<i>Short Description</i>
18.	<p><b><u>Funding Organization:</u></b> EC <b><u>Contract No:</u></b> IAP-2001-2110 <b><u>Programme:</u></b> FP5-IAP <b><u>Internal Account</u></b> <b><u>Department No:</u></b> 929  <b>Partner</b></p>	<p><b><u>Title:</u></b> SCOFI “Filtering the Internet by use of a Smart card” <b><u>Project Manager:</u></b> C.D. SPYROPOULOS <b><u>Budget of NCSR :</u></b> 259.476 € <b><u>Total Budget ::</u></b> 1.052.079 € <b><u>Starting Date:</u></b> 01/01/2002 <b><u>Duration:</u></b> 30 months <b><u>URL:</u></b> <a href="http://www.scofi.net/">http://www.scofi.net/</a></p>	<p>SCOFI developed a system for filtering web pages containing harmful content for children. The system is based on smart cards technology and exploits techniques for multimedia content analysis.</p>
<i>Nr</i>	<i>Contract Details</i>	<i>Project Data</i>	<i>Short Description</i>
19.	<p><b><u>Funding Organization:</u></b> EC <b><u>Contract No:</u></b> IST-2000-25366 <b><u>Programme:</u></b> FP5-IST <b><u>Internal Account</u></b> <b><u>Department No:</u></b> 858  <b>Coordinator</b></p>	<p><b><u>Title:</u></b> CROSSMARC: CROSS-lingual Multi-Agent Retail Comparison <b><u>Project Manager:</u></b> C.D. SPYROPOULOS <b><u>Budget of NCSR :</u></b> 847.264 € <b><u>Total Budget :</u></b> 2.625.551 € <b><u>Starting Date:</u></b> 01/01/2001 <b><u>Duration:</u></b> 30 months <b><u>URL:</u></b> <a href="http://www.iit.demokritos.gr/skel/crossmarc">http://www.iit.demokritos.gr/skel/crossmarc</a></p>	<p>Development of technology for web content analysis. CROSSMARC technology was examined in four languages (Greek, English, Italian, and French), and two application domains (laptop offers, job offers). CROSSMARC developed an infrastructure that facilitates the integration of new tools and the adaptation to new domains.</p>
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
20.	<p><b><u>Funding Organization:</u></b> EC <b><u>Contract No:</u></b> IST-1999-10982 <b><u>Programme:</u></b> FP5-IST <b><u>Internal Account</u></b> <b><u>Department No:</u></b> 742  <b>Partner</b></p>	<p><b><u>Title:</u></b> M PIRO: Multilingual Personalised Information Object <b><u>Project Manager:</u></b> C.D. SPYROPOULOS <b><u>Budget of NCSR :</u></b> 526.742 € <b><u>Total Budget ::</u></b> 1.903.013 € <b><u>Starting Date:</u></b> 01/02/2000 <b><u>Duration:</u></b> 36 months <b><u>URL:</u></b> <a href="http://www.ltg.ed.ac.uk/mpiro/">http://www.ltg.ed.ac.uk/mpiro/</a></p>	<p>The M-PIRO project developed state of the art techniques and tools in natural language generation, speech synthesis, user modelling, and their interaction with adaptive hypermedia and virtual reality systems. The project built on existing museum collection information database systems, and utilised the information management and design expertise from the museum partners.</p>

<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
21.	<p><b><u>Funding Organization:</u></b> EC</p> <p><b><u>Contract No:</u></b> <b><u>Programme:</u></b> Greece-Cyprus S&amp;T Cooperation</p> <p><b><u>Internal Account</u></b> <b><u>Department No:</u></b> 849</p> <p><b>Coordinator</b></p>	<p><b><u>Title:</u></b> WebC-MINE: Web usage mining from proxy/cache server logs</p> <p><b><u>Project Manager:</u></b> V. KARKALETSIS</p> <p><b><u>Budget of NCSR :</u></b> 8.782,10 €</p> <p><b><u>Total Budget :</u></b> 8.782,10 €</p> <p><b><u>Starting Date:</u></b> 01/03/2001</p> <p><b><u>Duration:</u></b> 24 months</p> <p><b><u>Extension till :</u></b> 31/12/2003</p> <p><b><u>URL:</u></b></p>	Development of technology for processing large-scale usage data collected by Internet Service Providers (ISP), in order to discover knowledge from these data. This knowledge is used to model the ISP users.
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
22.	<p><b><u>Funding Organization:</u></b> GSRT</p> <p><b><u>Contract No:</u></b> NEO EKBAN 2-1.3-102</p> <p><b><u>Programme:</u></b> EPET-II, Line:1.3, Action:EKBAN.</p> <p><b><u>Internal Account</u></b> <b><u>Department No:</u></b> 652</p> <p><b>Coordinator</b></p>	<p><b><u>Title:</u></b> Document filtering, information extraction and data-mining applied to financial news (MITOS)</p> <p><b><u>Project Manager:</u></b> C.D. SPYROPOULOS</p> <p><b><u>Budget of NCSR :</u></b> 61.029.000 GRD (179.102 €)</p> <p><b><u>Total Budget :</u></b> 330.000.000 GRD (968.452 €)</p> <p><b><u>Starting Date:</u></b> 01/04/1999</p> <p><b><u>Duration: 24 months</u></b></p> <p><b><u>URL:</u></b> <a href="http://www.iit.demokritos.gr/skel/mitos">http://www.iit.demokritos.gr/skel/mitos</a></p>	MITOS addressed the problem of information overload by developing a system able to filter and extract information from electronic news articles, as well as to discover new knowledge implicitly stored in databases. The system was tested with news and data from the Greek financial market.
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
23.	<p><b><u>Funding Organization:</u></b> GSRT</p> <p><b><u>Contract No:</u></b> GSRT-PENED-2000-ED265</p> <p><b><u>Programme:</u></b> PENED'99.</p> <p><b><u>Internal Account</u></b> <b><u>Department No:</u></b></p> <p><b>Partner</b></p>	<p><b><u>Title:</u></b> Executable Intentional Languages and Intelligent Applications in Multimedia, Hypermedia and Virtual Reality</p> <p><b><u>Project Manager:</u></b> M. GERGATSOULIS</p> <p><b><u>Budget of NCSR :</u></b> 18.500.000 GRD (54.292 €)</p> <p><b><u>Total Budget :</u></b> 54.000.000 GRD (158.474 €) ??????</p> <p><b><u>Starting Date:</u></b> 01/12/1999</p> <p><b><u>Duration:</u></b> 20 months</p> <p><b><u>URL:</u></b></p>	
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
24.	<p><b><u>Funding Organization:</u></b> GSRT</p> <p><b><u>Contract No:</u></b> GSRT-PENED-2000-ED623</p> <p><b><u>Programme:</u></b> PENED'99</p> <p><b><u>Internal Account</u></b> <b><u>Department No:</u></b></p> <p><b>Partner</b></p>	<p><b><u>Title:</u></b> Navigation and Control of Mobile Robot for Hospital Services (HYGEIOROBOT)</p> <p><b><u>Project Manager:</u></b> C.D. SPYROPOULOS</p> <p><b><u>Budget of NCSR :</u></b> 18.900.000 GRD (55.466 €)</p>	This research project aimed at the development and implementation of algorithms for manipulation and navigation control of a mobile robotic system. The final goal of the system is to evaluate the potential of intelligent

		<p><b><u>Total Budget</u></b> :: 60.000.000 GRD. (176.082 €)  <b><u>Starting Date</u></b>: 01/01/2000  <b><u>Duration</u></b>: 18 months  <b><u>URL</u></b>:  <a href="http://www.iit.demokritos.gr/skel/en/Projects/HygeioRobot_Description.htm">http://www.iit.demokritos.gr/skel/en/Projects/HygeioRobot_Description.htm</a></p>	robot technology in performing assistive tasks within a hospital environment.
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
25.	<p><b><u>Funding</u></b>  <b><u>Organization</u></b>: GSRT  <b><u>Contract No.</u></b>: GSRT-EPET-98 GT-16  <b><u>Programme</u></b>: EPET-II, Line: 2.3, Action: Language Technology  <b><u>Internal Account</u></b>  <b><u>Department No.</u></b>: 714    <b>Coordinator</b></p>	<p><b><u>Title</u></b>: Automatic Acquisition of Named-Entity Recognition Grammars for Greek (AUTONOMA)  <b><u>Project Manager</u></b>: C.D. SPYROPOULOS  <b><u>Budget of NCSR</u></b> : 5.000.000 GRD (14.673 €)  <b><u>Total Budget</u></b> : 5.000.000 GRD (14.673 €)  <b><u>Starting Date</u></b>: 01/10/1999  <b><u>Duration</u></b>: 18 months  <b><u>URL</u></b>:  <a href="http://www.iit.demokritos.gr/skel/en/Projects/AUTONOMA_Description.htm">http://www.iit.demokritos.gr/skel/en/Projects/AUTONOMA_Description.htm</a></p>	Use of grammar induction methods for the acquisition of Named-Entity grammars in Greek.
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
26.	<p><b><u>Funding</u></b>  <b><u>Organization</u></b>: GSRT  <b><u>Contract No.</u></b>: EPET-98 GT-5  <b><u>Programme</u></b>: EPET-II, Line: 2.3, Action: Language Technology  <b><u>Internal Account</u></b>  <b><u>Department No.</u></b>: 722    <b>Partner</b></p>	<p><b><u>Title</u></b>: Integrated environment for the development and exploitation of Greek controlled languages (SCHEMATOPOIESIS)  <b><u>Project Manager</u></b>: C.D. SPYROPOULOS  <b><u>Budget of NCSR</u></b> : 16.350.000 GRD (47.982 €)  <b><u>Total Budget</u></b> : 100.000.000 GRD (293.470 €)  <b><u>Starting Date</u></b>: 18/11/1999  <b><u>Duration</u></b>: 19 months  <b><u>URL</u></b>:  <a href="http://www.iit.demokritos.gr/skel/schema/">http://www.iit.demokritos.gr/skel/schema/</a></p>	SCHEMATOPOIESIS developed the first Greek prototype style checker to assist Greek technical writers as well as to facilitate translation from Greek to other languages. The project covered technical documents from the domain of computational equipment.
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
27.	<p><b><u>Funding</u></b>  <b><u>Organization</u></b>: GSRT  <b><u>Contract No.</u></b>:  <b><u>Programme</u></b>: Greece-France S&amp;T Cooperation  <b><u>Internal Account</u></b>  <b><u>Department No.</u></b>: 769    <b>Coordinator</b></p>	<p><b><u>Title</u></b>: Adaptive Information Extraction Technology (ADIET)  <b><u>Project Manager</u></b>: C.D. SPYROPOULOS  <b><u>Budget of NCSR</u></b> : 3.950.000 GRD (11.592 €)  <b><u>Total Budget</u></b> :: 11.900.000 GRD (34.923 €)  <b><u>Starting Date</u></b>: 18/11/1999  <b><u>Duration</u></b>: 24 months  <b><u>URL</u></b>:  <a href="http://www.iit.demokritos.gr/skel/en/Projects/ADIET_Description.htm">http://www.iit.demokritos.gr/skel/en/Projects/ADIET_Description.htm</a></p>	Development of a tool for the customization of Named-Entity Recognition Systems in different languages, with the use of Machine Learning methods.

<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
28.	<p><b><u>Funding Organization:</u></b> GSRT  <b><u>Contract No:</u></b>  <b><u>Programme:</u></b> Greece-Italy S&amp;T Cooperation  <b><u>GEL No:</u></b> 683</p> <p><b>Coordinator</b></p>	<p><b><u>Title:</u></b> Adaptive Named Entity Recognition Technology (ANET)  <b><u>Project Manager:</u></b> C.D. SPYROPOULOS  <b><u>Budget of NCSR:</u></b> 4.096.000 GRD (12.020 €)  <b><u>Total Budget .:</u></b> 4.096.000 GRD (12.020 €)  <b><u>Starting Date:</u></b> 01/07/1999  <b><u>Duration:</u></b> 24 months  <b><u>URL:</u></b>  <a href="http://www.iit.demokritos.gr/skel/en/Projects/ANET_Description.htm">http://www.iit.demokritos.gr/skel/en/Projects/ANET_Description.htm</a></p>	Development of a Named-Entity Recognition System for Greek, Italian and English, using Machine Learning methods.
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
29.	<p><b><u>Funding Organization:</u></b> GSRT  <b><u>Contract No:</u></b> 98 AD-82  <b><u>Programme:</u></b> EPET-II, Line: 4.2, Action: Human Networks  <b><u>Internal Account Department No:</u></b> 793</p> <p><b>Partner</b></p>	<p><b><u>Title:</u></b> Human Network on Artificial Intelligence (AInet)  <b><u>Project Manager:</u></b> C.D. SPYROPOULOS  <b><u>Budget of NCSR:</u></b> 300.000 GRD_(880 €)  <b><u>Total Budget:</u></b> 15.000.000 GRD (44.020 €)  <b><u>Starting Date:</u></b> 01/01/2000  <b><u>Duration:</u></b> 18 months  <b><u>URL:</u></b> <a href="http://www.ainet.aueb.gr/">http://www.ainet.aueb.gr/</a></p>	AInet was a network of research organizations focusing on artificial Intelligence. Seminars and workshops were organized with the aim to train and inform students and professionals on various aspects of these technologies.
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
30.	<p><b><u>Funding Organization:</u></b> GSRT  <b><u>Contract No:</u></b> 98 AD-44  <b><u>Programme:</u></b> EPET-II, Line: 4.2, Action: Human Networks  <b><u>Internal Account Department No:</u></b> 861</p> <p><b>Partner</b></p>	<p><b><u>Title:</u></b> Human Network for the Dissemination and Use of new Technologies on Data Bases (HELDINET)  <b><u>Project Manager:</u></b> C.D. SPYROPOULOS  <b><u>Budget of NCSR:</u></b> 900.000 GRD (2.641 €)  <b><u>Total Budget:</u></b> 16.000.000 GRD (47.000 €)  <b><u>Starting Date:</u></b> 01/01/2000  <b><u>Duration:</u></b> 18 months  <b><u>URL:</u></b>  <a href="http://heldinet.dbnet.ece.ntua.gr/">http://heldinet.dbnet.ece.ntua.gr/</a></p>	HELDiNET was a network of research organizations focusing on new database technologies. Seminars and workshops were organized with the aim to train and inform students and professionals on various aspects of these technologies.
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
31.	<p><b><u>Funding Organization:</u></b> NCSR  <b><u>Contract No:</u></b>  <b><u>Programme:</u></b> DEMOEREYNA (RESEARCH-DEMOKRITOS '99)  <b><u>Internal Account Department No:</u></b> 624</p>	<p><b><u>Title:</u></b> Automatic Construction of User Communities in Digital Libraries (KOINOTITES)  <b><u>Project Manager:</u></b> C.D. SPYROPOULOS  <b><u>Budget of I.I.&amp;T.:</u></b> 1.200.000 GRD (3.522 €)  <b><u>Total Budget of NCSR:</u></b> 4.000.000 GRD (11.740 €)  <b><u>Starting Date:</u></b> 01/01/2000  <b><u>Duration:</u></b> 18 months</p>	KOINOTITES (transliteration of the Greek word for Communities) was a project funded internally by NCSR "Demokritos" to study the effect of personalization in digital libraries. In the course of the project, unsupervised machine learning methods were evaluated on the task of constructing models for communities of users with common interests and/or common navigational behavior in the site of a



	<b>The institute (I.I.&amp;T.) was a partner</b>	<b><u>URL:</u></b> http://www.iit.demokritos.gr/skel/en/Projects/KOINOTITES_Description.htm	digital library.
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<b>MOBILE COMMUNICATIONS LABORATORY</b>			
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
32.	<p><b><u>Funding Organization:</u></b> GSRT</p> <p><b><u>Contract No</u></b></p> <p><b><u>Programme:</u></b> ΕΠΙΑΝ ΔΡΑΣΗ.4.3.6.1 (S&amp;T Cooperation)</p> <p><b><u>Internal Account</u></b></p> <p><b><u>Department No:</u></b> 893</p> <p><b>Partner</b></p>	<p><b><u>Title:</u></b> Study of interaction between the antenna of mobile handsets and the human body</p> <p><b><u>Project Manager:</u></b> A. ALEXANDRIDIS</p> <p><b><u>Budget of NCSR :</u></b> 11.400,00</p> <p><b><u>Total Budget :</u></b></p> <p><b><u>Starting Date:</u></b> 01/09/2001</p> <p><b><u>Duration:</u></b> 33 months</p> <p><b><u>URL:</u></b></p>	<p>The interaction between the antenna of the mobile terminal and the body of the user holding it constitutes the main research objective of this project. More specifically, in the framework of the project, the mechanism and the parameters of this interaction are studied in detail. The aim is the evaluation of the handheld antenna performance degradation and on the other hand the determination of the amount of the RF power absorbed in the human body. The derived results can be used in the optimization of the design and development of new more efficient handheld antennas and on the other hand, respectively, these results can be used to evaluate potential health effects or compliance with appropriate standards. A theoretical EM model has been developed, evaluated and optimized with measurements data that will be derived through a measurement procedure using prototype measuring setup especially developed for this purpose. The measurement methodology is based on far field EM radiation measurements conducted in the anechoic chamber of the Institute using prototype models of mobile phones and phantom-heads, simulating the electromagnetic behavior of the human head in the vicinity of a radiating handset.</p>

<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
33.	<p><b><u>Funding Organization:</u></b> EC</p> <p><b><u>Contract No</u></b> <b><u>Programme:</u></b> GROWTH/Thematic Networks, FP5</p> <p><b><u>Internal Account</u></b> <b><u>Department No:</u></b> 1035</p> <p><b>Partner</b></p>	<p><b><u>Title:</u></b> Forum of laboratories implementing EU Electromagnetic Compatibility Directive (FOR- EMC)</p> <p><b><u>Project Manager:</u></b> A. ALEXANDRIDIS</p> <p><b><u>Budget of NCSR</u></b> :11.947,00</p> <p><b><u>Total Budget :</u></b></p> <p><b><u>Starting Date:</u></b> 01/01/2003</p> <p><b><u>Duration:</u></b> 27 months</p> <p><b><u>URL:</u></b> <a href="http://www.for-emc.org/">http://www.for-emc.org/</a></p>	<p>The main objective of the project is to establish a network (forum) on European scale of EMC laboratories implementing or intending to implement the EMC Directive (89/336/EEC). This network of EMC laboratories aims to enhance collaboration between European units in order to prepare laboratories in the Candidate States for the process of implementation of the EMC Directive. With this general goal in mind, the network pursues the following objectives:</p> <p>Promotion of the EMC Directive; Propagation of European practice and requirements; Promotion of application of harmonized standards and clarification of related ambiguities; Elimination of problems in the implementation of ISO/IEC 17025; Raising awareness of the role of EMC laboratories and competent bodies; Progress in qualifications of the operating personnel; Promoting the use of full-compliance equipment and appropriate test set-ups; Collection of generic knowledge related to the implementation of New Approach Directives.</p> <p>A study has been conducted aiming to gather information about the EMC activities, resources and capabilities of EMC testing Laboratories in Greece. The derived data are used to update the Database on EMC European Laboratory Resources that has been developed in the frame of the project.</p>
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
34.	<p><b><u>Funding Organization:</u></b> EC</p> <p><b><u>Contract No</u></b> <b><u>Programme:</u></b> FP6/IST/NoE (Network of excellence)</p> <p><b><u>Internal Account</u></b> <b><u>Department No:</u></b> 1126</p> <p><b>Partner</b></p>	<p><b><u>Title:</u></b> Antenna Centre of Excellence (ACE)</p> <p><b><u>Project Manager:</u></b> A.ALEXANDRIDIS</p> <p><b><u>Budget of NCSR :</u></b> 47.000,00</p> <p><b><u>Total Budget :</u></b></p> <p><b><u>Starting Date:</u></b> 01/01/2004</p> <p><b><u>Duration:</u></b> 24 months</p> <p><b><u>URL:</u></b> <a href="http://www.ist-ace.org/">http://www.ist-ace.org/</a></p>	<p>The main objective of this project is to structure the fragmented European antenna R&amp;D, reduce duplications and boost excellence and competitiveness in key areas. ACE deals with the antenna function of radio systems. This includes the electromagnetic interface from conductors to free space radiated waves, the beam-forming functions, whether they are analogue or digital, and adaptive "smart" systems to optimize performance. The initial core participants of this NoE are 40 leading European institutions in antenna technology starting the R&amp;D integration. Other excellent entities are providing their contributions under NoE funding. All benefit from the NoE facilities and events. The network has been structured to achieve vertical and horizontal integration of R&amp;D activities. In the framework of this project our Institute is mainly involved in the research areas of smart antenna technology and methodologies for antenna characterization measurements.</p>
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
35.	<p><b><u>Funding Organization:</u></b> GSRT</p> <p><b><u>Contract No</u></b> <b><u>Programme:</u></b> EITEAEK (1999-2001),</p> <p><b><u>Internal Account</u></b></p>	<p><b><u>Title:</u></b> Flexible Wireless Network for Automation and Control Processes</p>	<p>The project objective was to develop a flexible, low cost, wireless (full duplex) smart network for automation and control processes. One of the main features of the system is its capability to be self-configured by changing the network topology automatically, based on logical addresses. The</p>

	<u>Department No:</u>  <b>Partner</b>	<u>Project Manager:</u> P. KATRIVANOS <u>Budget of NCSR:</u> <u>Total Budget:</u> 52.000.000 δρχ <u>Starting Date:</u> 28/12/00 <u>Duration:</u> 18 months <u>URL:</u>	network consists of several identical remote stations controlled by one central station, which has also access to Internet. The system is reconfigurable, so that the number of the remote stations can be varied without affecting the network performance. This makes the system particularly flexible in automatic control applications.
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<b>DIGITAL TELECOMMUNICATIONS LABORATORY</b>			
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
36.	<u>Funding</u> <u>Organization:</u> GSRT <u>Contract No.:</u> <u>Programme:</u> EPET II <u>Internal Account</u> <u>Department No:</u> 670  <b>Contractor</b>	<u>Title:</u> AMFITRYON (Interactive TV programs through computer networks) <u>Scientific Responsible:</u> A. KOURTIS <u>Budget of NCSR "Demokritos":</u> 79.237 €. <u>Total Budget:</u> 836.390 € <u>Starting date:</u> 1/4/1999 <u>Duration:</u> 24 months <u>URL:</u>	The objective of this project is the creation of an integrated environment for the provision of TV programs through computer networks. Its aim is the development of the principles and functionalities of Video on Demand and interactive television services. Digital programs are distributed under the request and control of the user, through a computer network, directly to his personal computer. The capability of interaction and participation to the TV program is provided to the end user/viewer. The expected results were the implementation of a network infrastructure that was able to provide TV services directly to the home of the user through a PC. The project contributed towards the creation of an alternatively solution, apart from the TV set, for the provision of interactive TV services and also allowed the end users to actively participate in the distributed program.
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
37.	<u>Funding</u> <u>Organization:</u> GSRT <u>Contract No.:</u> <u>Programme:</u> EPET II, <u>Internal Account</u> <u>Department No:</u> 693  <b>Co-ordinator</b>	<u>Title:</u> System for information and training of persons with special needs (AMEA TOOLS) <u>Scientific Responsible:</u> A. KOURTIS <u>Budget of NCSR "Demokritos":</u> 72.634 €. <u>Total Budget:</u> 278.796 €. <u>Starting date:</u> 1/6/1999 <u>Duration:</u> 24 months <u>URL:</u>	The objective of the project was the design and development of an integrated information environment, which included: a) special technological equipment, adapted to the needs of persons with special needs (PSN) b) specialized software packages c) specially structured and presented information concerning items relevant to PSNs. The system worked as a pilot project for the needs of the Center "Communication", but it was also open to for use by other organizations. The project lead to the implementation of an information point in the Internet (portal) for PSNs, as well as the creation of an open and dynamic tele-education system, that supported interactive education. The system was based on a

			<p>combination of Internet, Telecommunications technologies and data bases and fulfilled the principles of “Design for all” and “Universal Accessibility”. The system included a special interface for usage and the connection of special terminals that allowed PSNs to exploit the system. During its life time the project gave to a number of persons with special needs to enter into the Internet and get a variety of information mainly concerning the users’ needs.</p>
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
38.	<p><b><u>Funding</u></b>  <b><u>Organization:</u></b> GSRT  <b><u>Contract No.:</u></b>  <b><u>Programme:</u></b> PAVE 99  <b><u>Internal Account</u></b>  <b><u>Department No:</u></b> 692</p> <p>Contractor</p>	<p><b><u>Title:</u></b> Virtual Video club : Design and development of an integrated system for the management and distribution of multimedia content through a wireless subscription system  <b><u>Scientific Responsible:</u></b> A. KOURTIS  <b><u>Budget of NCSR “Demokritos”:</u></b> 49.376 €.  <b><u>Total Budget:</u></b> 234.556 €.  <b><u>Starting date:</u></b> 1/11/1999  <b><u>Duration:</u></b> 12 months  <b><u>URL:</u></b></p>	<p>The objective of this project was the design, development and demonstration of an integrated distributed environment for the management and distribution of audiovisual content through the use of advanced video coding technologies, storage, wireless communications and interconnection of users. The project developed a pilot site, which was used to demonstrate the capabilities of the proposed method. The pilot application concerned the creation of a virtual video club, within the limits of a neighborhood. The proposed application replaced all activities in the relation customer – video club, with respective ones that are based on electronic communication and do not require the physical move of people or content. The project demonstrated to the citizens/customers the capability of using new technological developments in their every day entertainment activities.</p>
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
39.	<p><b><u>Funding</u></b>  <b><u>Organization:</u></b> EU  <b><u>Contract No.:</u></b> IST-2000-26298  <b><u>Programme:</u></b> IST/FP5  <b><u>Internal Account</u></b>  <b><u>Department No:</u></b> 850</p> <p>Co-ordinator</p>	<p><b><u>Title:</u></b> MAMBO (Multi-services Management Wireless Network With Bandwidth Optimisation)  <b><u>Scientific Responsible:</u></b> A. KOURTIS  <b><u>Budget of NCSR “Demokritos”:</u></b> 447.000 €.  <b><u>Total Budget:</u></b> 4.900.000 €  <b><u>Starting date:</u></b> 1/1/2001  <b><u>Duration:</u></b> 24 months  <b><u>URL:</u></b></p>	<p>The MAMBO project addressed the problem of managing the audio-video services distribution on the available bandwidth. It is clear that the main advantage of using digital transmission for audio-video services has been and will be the ability to use less bandwidth and infrastructure for reduced operation expenses per program. The project proposed an innovative concept and system capable of optimising the bandwidth allocation for every service, function of the complexity of the service and based on the perceived quality of the service. The activities concentrated on the development and implementation of key components of the distributed feed back loop bandwidth allocation system, which is the kernel of an open and scalable solution. The proposed architecture is the solution for service providers and mobile operators who demand a flexible and cost-effective method for managing compressed digital services while maximising bandwidth capacity but maintaining the service quality. At the service provider site, the operator is able to select specific services of interest, from a large number of TV and IP</p>

			<p>services, locally generated or arriving at its premises via satellite, terrestrial or cable networks. This solution, available in real time, enables operators to statistically re-multiplex services from a variety of sources and create a new, customised statistical multiplex while optimising bandwidth for delivery of additional tiered services. A prototype, incorporating the developed key building modules, was implemented in order to validate the new technology and to evaluate the performance and the quality of the services.</p> <p>The project contributed towards the interactive broadcasting concept, which aims to bring closer the broadcasting and telecomm operator worlds. In the frame of MAMBO, I.I.T. developed specific parts of an innovative bandwidth management system, operating over a DVB-T network, which is currently imbedded in the equipment and systems of THALES.</p> <p>The know-how and the DVB-T platform that was acquired during this project have been presented to public and private TV broadcasters, in an effort to introduce digital terrestrial TV in Greece. Furthermore, the use and advantages of digital terrestrial TV has been presented to the Greek Government, in order to help towards a more efficient spectrum planning, considering that in a few years, all analog TV stations will have to turn into digital, following the respective directive from the EU.</p>
<b>Nr</b>	<b>Contract Data</b>	<b>Project Data</b>	<b>Short Description</b>
40.	<p><b><u>Funding</u></b>  <b><u>Organization:</u></b> EU  <b><u>Contract No.:</u></b> IST-2000-28521  <b><u>Programme:</u></b> IST/FP5  <b><u>Internal Account</u></b>  <b><u>Department No:</u></b> 899</p> <p><b>Contractor</b></p>	<p><b><u>Title:</u></b> SOQUET (System for management of Quality of Service in 3G networks)  <b><u>Scientific Responsible:</u></b> A. KOURTIS  <b><u>Budget of NCSR "Demokritos":</u></b> 338.652 €.  <b><u>Total Budget:</u></b> 3.723.000 €  <b><u>Starting date:</u></b> 1/7/2001  <b><u>Duration:</u></b> 32 months  <b><u>URL:</u></b>  <a href="http://www.soquet.leeds.ac.uk/">http://www.soquet.leeds.ac.uk/</a></p>	<p>3G systems will allow the inter-connection of heterogeneous intelligent networks and applications. The objective of project SOQUET was to provide methodologies that allow the definition and provision of a particular quantifiable quality of service (QoS) across heterogeneous networks for all users; individuals, groups, professionals and consumers. The QoS defined relied on the users perceived QoS, in order to manage the resources to meet users end-to-end requirements. This was demonstrated through provision of a QoS management model applied on critically reliable, time critical, band-limited systems. Several services, such as audio/video multicasting over IP, were operated on UMTS and DVB experimental platforms. An Optimisation of network capacity and performance and an increase in network management flexibility was achieved.</p>

			<p>The results of SOQUET directly affect the society, because the tools and methods developed, exploit the QoS as perceived by the end-user. The perceived QoS is objectively measured using special perceived quality meters, imbedded in the user terminal.</p> <p>In the frame of SOQUET, I.I.T. contributed to the design and implementation of method for the real time communication of Perceived Quality Meters (produced by Rohde &amp; Schwartz) with the DVB-T transmission center, in order to adjust the transmission parameters according to the perceived quality at the reception sites. The new generation of the Perceived Quality Meters of R&amp;S will include the developed communication method.</p>
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
41.	<p><b><u>Funding</u></b>  <b><u>Organization:</u></b> EU  <b><u>Contract No.:</u></b> IST-2001-34692  <b><u>Programme:</u></b> IST/FP5  <b><u>Internal Account</u></b>  <b><u>Department No:</u></b> 953</p> <p><b>Contractor</b></p>	<p><b><u>Title:</u></b> REPOSIT (Real Time Dynamic Bandwidth Optimisation in Satellite Networks)  <b><u>Scientific Responsible:</u></b> A. KOURTIS  <b><u>Budget of NCSR "Demokritos":</u></b> 740.200 €.  <b><u>Total Budget:</u></b> 4.555.000 €  <b><u>Starting date:</u></b> 1/3/2002  <b><u>Duration:</u></b> 32 months  <b><u>URL:</u></b>  <a href="http://www.oteconsult.gr/reposit/">http://www.oteconsult.gr/reposit/</a></p>	<p>The key objective of the REPOSIT project was to define, implement demonstrate and validate a spectrum efficient interactive satellite (DVB-S) network, using real time dynamic management of the available bandwidth, for supporting a variety of heterogeneous bit rate services, like interactive TV, Internet and multimedia services. The network was used for the interconnection of terrestrial distribution nodes and was tested, demonstrated and validated over an actual satellite. Both the downlink and uplink were based on DVB-S technology. The project included the implementation, testing and validation of the overall network performance for three characteristic types of terrestrial networks : DVB-T, WLAN and ADSL, thus contributing towards the convergence of DVB-S technology with wired and wireless terrestrial networks in an integrated and seamless environment.</p> <p>In the frame of REPOSIT, I.I.T. contributed to the development of some parts of a management system for DVB-S routers to be developed by THALES. This system is important for the guarantee of QoS for IP services, according to their priorities.</p>
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
42.	<p><b><u>Funding</u></b>  <b><u>Organization:</u></b> EU</p>	<p><b><u>Title:</u></b> ATHENA (Real Time Dynamic Bandwidth</p>	<p>In Sevilla European Council it was indicated that two major problems (among the others) have to be solved towards eEurope 2005 and beyond: the</p>

	<p><b><u>Contract No.:</u></b> IST-FP6-507312  <b><u>Programme:</u></b> STREP , IST/FP6  <b><u>Internal Account Department No:</u></b> 1123  <b>Co-ordinator</b></p>	<p>Optimisation in Satellite Networks)  <b><u>Scientific Responsible:</u></b> A. KOURTIS  <b><u>Budget of NCSR "Demokritos":</u></b> 573.520,00 €  <b><u>Total Budget:</u></b> 3.899.545 €  <b><u>Starting date:</u></b> 1/1/2004  <b><u>Duration:</u></b> 30 months  <b><u>URL:</u></b> <a href="http://www.ist-athena.org/">http://www.ist-athena.org/</a></p>	<p>transition to digital television in UHF band (digital switchover) and the broadband access for all. ATHENA project considers that if proper decision will be taken for the digital switchover (taking into account the networking aspect of the new television) it will also provide a solution for the second problem (the broadband access for all citizens). It presents an approach towards the solution of the digital switchover that comprises the use of the DVB stream for interconnecting next generation network (NGN) nodes, by the use of regenerative configurations. The utilisation of regenerative configurations enables for the realisation of a virtual common Ethernet backbone that can be exploited by 3G/UMTS and B3G operators and broadcasters, besides enabling for broadband access for all citizens. Such a configuration enables for multi-service capability, as the regenerative DVB-T creates a single access network physical infrastructure, shared by multiple services (i.e. TV programmes, interactive multimedia services, Internet applications, etc.). Validation of such a broadband access for all citizens infrastructure, based on the proper adoption of digital switchover, will be validated in a real condition trial in a medium-sized city. The above trial includes the implementation, testing and validation of a spectrum efficient real time dynamic management of the available bandwidth, for supporting the variety of heterogeneous bit rate services, and of a traffic policy mechanism, for UMTS users on the move, for seamless reception of IP data when transition from one UHF channel (DVB-T stream) to another is required. I.I.T. in co-operation with the CTRC has developed in the city of Heraklion in Crete a large scale DVB-T platform, where citizens are able to see the capabilities of digital terrestrial TV and even receive them in their homes. I.I.T. has continued the efforts to introduce digital terrestrial TV into Greece and demonstrate its capabilities not only for the provision of more TV programs, but also as a networking infrastructure that is able to cover large areas. The efforts extend to organisation of workshops, special meeting events and interviews in the media (TV and radio stations, in newspapers and magazines).</p>
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
43.	<p><b><u>Funding Organization:</u></b> EU  <b><u>Contract No.:</u></b> IST-FP6-507637  <b><u>Programme:</u></b> IST/FP6  <b><u>Internal Account</u></b></p>	<p><b><u>Title:</u></b> ENTHRONE (Real Time Dynamic Bandwidth Optimisation in Satellite Networks)  <b><u>Scientific Responsible:</u></b> A. KOURTIS  <b><u>Budget of NCSR "Demokritos":</u></b></p>	<p>The ENTHRONE project proposes an integrated management solution which covers an entire audio-visual service distribution chain, including content generation and protection, distribution across networks and reception at user terminals. The aim is not to unify or impose a strategy on each individual entity of the chain, but to harmonise their functionality, in order to support</p>

	<p><b><u>Department No:</u></b> 1124</p> <p><b>Contractor</b></p>	<p>647.580,00 €</p> <p><b><u>Total Budget:</u></b> 15.372.290 €</p> <p><b><u>Starting date:</u></b> 1/12/2003</p> <p><b><u>Duration:</u></b> 48 months</p> <p><b><u>URL:</u></b> <a href="http://www.enthrone.org/">http://www.enthrone.org/</a></p>	<p>an end-to-end QoS architecture over heterogeneous networks, applied to a variety of audio-visuals services, which are delivered at various user terminals. To meet its objectives, the project will rely on an efficient, distributed and open management architecture for the end-to-end delivery chain. The availability and access to resources will be clearly identified, described and controlled all the way along the content distribution chain. The MPEG-21 data model will be used to provide the common support for implementing and managing the resources functionalities.</p> <p>The ENTHRONE project addresses the scalable generation, protection, distribution and usage of multimedia content and resources in geographically distributed environments. ENTHRONE is concerned with end-to-end QoS in terms of performance, at both the user and network levels, and with the mapping between these levels. Adopting the MPEG-21 framework in our project will contribute to implement the <i>Universal Multimedia Access</i> (UMA) concept, which aims at achieving interoperable transparent access to multimedia resources from any type of client terminal or network. A high-level goal of the ENTHRONE project is to bridge the divide between the content provision and the networking worlds, resulting in cross-industry co-ordination on both network and content management issues, and bringing focus to mutually advantageous standards such as MPEG-21.</p> <p>Presently, I.I.T. has developed a heterogeneous platform supporting end to end QoS, based on the concept of ENTHRONE.</p>
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<b>INTEGRATED SYSTEMS LABORATORY</b>			
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
44.	<p><b><u>Funding Organization:</u></b> GSRT</p> <p><b><u>Contract No.:</u></b></p> <p><b><u>Programme:</u></b> EPAN, ACTION 4.3.6.1, 1 FRENCH – GREEK COLLABORATION</p> <p><b><u>Internal Account</u></b></p>	<p><b><u>Title:</u></b> Virtual Laboratories Network for tele-learning and tele-working applications (VIRTULAB)</p> <p><b><u>Scientific Responsible:</u></b>S. THOMOPOULOS</p> <p><b><u>Budget of NCSR</u></b> <b><u>“DEMOKRITOS”:</u></b></p>	<p>The project aims to implement a cooperation network as well as to develop a technology platform based on distant learning technologies and training of engineers in order to strengthen two learning applications: (a) distance learning by mutual use of laboratory infrastructure of the two involved countries, and (b) distance industrial output for short or middle scale</p>



	<b><u>Department No:</u></b> 1004 <b>Co-ordinator</b>	14.673,00 <b><u>Total Budget:</u></b> <b><u>Starting date:</u></b> 04/12/2002 <b><u>Duration:</u></b> 18 <b><u>URL:</u></b>	production. The ultimate aim of the project is the creation of a “virtual laboratory” that will be used by students from both countries, the development of a mutual collaboration and the collaboration of the involved partners in European funded projects.
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
45.	<b><u>Funding Organization:</u></b> GSRT <b><u>Contract No.:</u></b> <b><u>Programme:</u></b> ΕΠΙΑΝ, ΔΡΑΣΗ: 4.5.1 <b><u>Internal Account</u></b> <b><u>Department No:</u></b> 1119  <b>Contractor</b>	<b><u>Title:</u></b> <i>Athletic Information inside a Stadium (ATHENS)</i> <b><u>Scientific Responsible:</u></b> S. THOMOPOULOS <b><u>Budget of NCSR “DEMOKRITOS”:</u></b> 62.535,00 <b><u>Total Budget:</u></b> <b><u>Starting date:</u></b> 01/06/2003 <b><u>Duration:</u></b> 18 months <b><u>URL:</u></b>	ATHENS aims to study and develop a new service for informing spectators. Specifically, it aims to provide advanced information services to spectators via a combination of wireless networks and terminal devices. As a sport event, the classic athletics have been chosen. The project aims to provide access through a wireless network to spectators of sport events, with the emphasis given to classic athletics.
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
46.	<b><u>Funding Organization:</u></b> GSRT <b><u>Contract No.:</u></b> <b><u>Programme:</u></b> ΕΠΙΑΝ, ΔΡΑΣΗ: 4.5.1 <b><u>Internal Account</u></b> <b><u>Department No:</u></b> 1101  <b>Contractor</b>	<b><u>Title:</u></b> <i>Intelligence Access Control System for entering in athletes events (Bioathletics)</i> <b><u>Scientific Responsible:</u></b> S. THOMOPOULOS <b><u>Budget of NCSR “DEMOKRITOS”:</u></b> 58.851,57 <b><u>Total Budget:</u></b> <b><u>Starting date:</u></b> 01/09/2003 <b><u>Duration:</u></b> 18 months <b><u>URL:</u></b>	The project aims to create an integrated system for controlling the access of persons in athletic organizations. The system consists of two subsystems: the first is dedicated to control the access of the certified persons, while the second is dedicated to control the access of the spectators.
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
47.	<b><u>Funding Organization:</u></b> GSRT <b><u>Contract No.:</u></b> <b><u>Programme:</u></b> ΚΤΠΛ, ACTION: 3.3.1 <b><u>Internal Account</u></b> <b><u>Department No:</u></b> 1129  <b>Contractor</b>	<b><u>Title:</u></b> <i>Toolbox for Scholl Libraries (eSchoolLib)</i> <b><u>Scientific Responsible:</u></b> S. THOMOPOULOS <b><u>Budget of NCSR “DEMOKRITOS”:</u></b> 170.000,00 <b><u>Total Budget:</u></b> <b><u>Starting date:</u></b> 01/10/2003 <b><u>Duration:</u></b> 18 <b><u>URL:</u></b>	The project will cover several needs of a school library like digitizing, archiving, indexing and searching in accordance with an asynchronous educational platform with remote access properties. The project’s target is an automated archiving-indexing tool that permits daily addition of an extensive amount of information and the encouragement of e-Learning in secondary school students through the provision of selected, quality information. Furthermore, the project aims to ensure the active participation of the teaching community in

			the program, by providing several features that will allow the remote access and uploading of information, the integration of this information with the main database of the school's library.
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
48.	<p><b><u>Funding Organization:</u></b> EC</p> <p><b><u>Contract No.:</u></b></p> <p><b><u>Programme:</u></b> IST</p> <p><b><u>Internal Account</u></b></p> <p><b><u>Department No:1184</u></b></p> <p><b>Contractor</b></p>	<p><b><u>Title:</u></b> <i>Location based services for enhancement of working environment (LIAISON)</i></p> <p><b><u>Scientific Responsible:</u></b>S. THOMOPOULOS</p> <p><b><u>Budget of NCSR "DEMOKRITOS":</u></b> 1.089.048.00</p> <p><b><u>Total Budget:</u></b></p> <p><b><u>Starting date:</u></b> 01/09/2004</p> <p><b><u>Duration:</u></b> 42</p> <p><b><u>URL:</u></b></p>	<p>The LIAISON project will turn emergent technologies, applications and services into actual business cases in order to allow key European actors to fulfil in a competitive manner the needs of workers in their daily life, for seamless and personalised location services across heterogeneous network. It will provide end-to-end Location Based Services, applications and solutions and will contribute to new business models to secure the sustainability of the services and applications. LIAISON'S objectives are user-driven: end user communities, including institutional bodies and industrial actors seeking currently unavailable reliable LBS solutions, are strongly committed through their direct integration into the consortium.</p>
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
49.	<p><b><u>Funding Organization:</u></b> EC</p> <p><b><u>Contract No.:</u></b> IST-1999-20078</p> <p><b><u>Programme:</u></b> IST</p> <p><b><u>Internal Account</u></b></p> <p><b><u>Department No:</u></b></p> <p><b>Contractor</b></p>	<p><b><u>Title:</u></b> BEE</p> <p><b><u>Scientific Responsible:</u></b> Σ. X. Α. ΘΩΜΟΠΟΥΛΟΣ</p> <p><b><u>Budget of NCSR "DEMOKRITOS":</u></b> 6,300 ΕΥΡΩ</p> <p><b><u>Total Budget:</u></b></p> <p><b><u>Starting date:</u></b> 1/5/2002</p> <p><b><u>Duration:</u></b> : 12 μήνες</p> <p>Παράταση έως: 31/04/2003</p>	<p>BEE investigates the elements that impede the business environment involved in electronic commerce from using biometric technologies for its security. BEE aims at identifying barriers, bottlenecks and proposing scenarios for creating a secure e-commerce business environment favourable to biometric technologies.</p> <p>The BEE project also identifies the social and economic impacts of using biometric technologies in the security of electronic commerce in the next decade, and it will quantify and demonstrate evolution scenarios, evaluating the social and economic impacts of the biometrics technologies and electronic commerce services on work and business.</p>
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
50.	<p><b><u>Funding Organization:</u></b> GAEC</p> <p><b><u>Contract No.:</u></b> 5-6-2002</p> <p><b><u>Programme:</u></b> Εργ. Παροχ. Υπηρε.</p> <p>EPAN, ACTION 4.5.1</p> <p><b><u>Internal Account</u></b></p> <p><b><u>Department No:</u></b> 831</p>	<p><b><u>Title:</u></b> <i>Greek Atomic Energy Commission's Web site</i></p> <p><b><u>Scientific Responsible:</u></b> Σ. X. Α. ΘΩΜΟΠΟΥΛΟΣ</p> <p><b><u>Budget of NCSR "DEMOKRITOS":</u></b> 8,000 ΕΥΡΩ</p> <p><b><u>Total Budget:</u></b></p>	<p>Development of dynamic Web site for the Greek Atomik Energy Commission, maintenance, technical support and upgrades.</p>

		<u>Starting date:</u> 05/06/2002 <u>Duration:</u> : <u>URL:</u>	
<i>Nr</i>	<i>Contract Data</i>	<i>Project Data</i>	<i>Short Description</i>
51.	<u>Funding Organization:</u> GSRT <u>Contract No.:</u> Y2K <u>Programme:</u> <u>Internal Account</u> <u>Department No:</u>	<u>Title:</u> The Problem of 2000 (Y2K ) <u>Scientific Responsible:</u> Σ. X. A. ΘΩΜΟΠΟΥΛΟΣ <u>Budget of NCSR</u> <u>“DEMOKRITOS”:</u> <u>159.602.170 δρχ.</u> <u>Total Budget: :</u> <u>159.602.170 δρχ.</u> <u>Starting date:</u> 01/09/1999 <u>Duration:</u> 18months <u>URL:</u>	Analysis of the Y2K problem in the NCSR “D” and implement a solution in order to face it