NCSR “DEMOKRITOS”

INSTITUTE OF INFORMATICS & TELECOMMUNICATIONS

PERIOD REPORT
2000 - 2004

Aghia Paraskevi, June 2000
OVERVIEW

Goal and Major Achievements

GOAL
Produce innovative results to the benefit of the Society and the Industry

- Developing a cellular wireless communication platform to provide user-defined and e-commerce services
- Measuring mobile handset – human head electromagnetic interaction
- Digitization and intelligent processing of old but valuable manuscripts
- Dissemination, diffusion and exploitation of results, opening new roads for cooperation internationally
- Protecting web users from harmful content and spam e-mails
- Managing and integrating heterogeneous Telecommunication Networks
- Tackling the information overloading problem

Personnel

<table>
<thead>
<tr>
<th>Type of personnel</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
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<tr>
<td>Researchers A</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>3</td>
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<tr>
<td>Researchers B</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Researchers C</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>3</td>
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<tr>
<td>Researchers D</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total number of Researchers</td>
<td>11</td>
<td>10</td>
<td>10</td>
<td>12</td>
<td>12</td>
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<tr>
<td>Functional Scientific Personnel</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
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<td>Visiting researchers</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Post-doc researchers</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>3</td>
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<td>Scientists &amp; engineers under research training</td>
<td>33</td>
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<td>Technical personnel</td>
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<td>23</td>
<td>16</td>
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<td>Administrative personnel</td>
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<td>7</td>
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<td>Auxiliary personnel</td>
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<td>Other (PART TIME)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20</td>
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<td><strong>TOTAL</strong></td>
<td><strong>80</strong></td>
<td><strong>83</strong></td>
<td><strong>56</strong></td>
<td><strong>57</strong></td>
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Scientific results

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

- ANET
- ADIET
- W3C-MINE
- TECHNOLANGUE
- PROCIS
- SCHEMATOPOIESIS
- MITOS
- KOINOTITES
- D-SCRIBE
- O.D.I.S.S.E.A.S.
<table>
<thead>
<tr>
<th>Funds Raised</th>
<th>( \text{Funds Raised} )</th>
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<tbody>
<tr>
<td><strong>IT Income for the period 2000-2004 (in k€)</strong></td>
<td><strong>IT Income for the period 2000-2004 (in k€)</strong></td>
</tr>
<tr>
<td>Income from the EU Framework Programmes (EU)</td>
<td>294.31</td>
</tr>
<tr>
<td>Public investment funds - national projects &amp; studies (GSRT/PI-NP)</td>
<td>432.32</td>
</tr>
<tr>
<td>Public investment funds- structural funds (GSRT/PI-SF)</td>
<td>32.90</td>
</tr>
<tr>
<td>Income from R&amp;D contracted by firms and other private legal entities &amp; Income from sales of products and services, studies, tests, etc to third parties (AS)</td>
<td>63.79</td>
</tr>
<tr>
<td>Public investment funds- other funding (df)</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Total Income from projects &amp; services</strong></td>
<td>823.33</td>
</tr>
<tr>
<td>Regular public budget funding (R.P.B.F.)</td>
<td>702.20</td>
</tr>
<tr>
<td>Income total (in k€)</td>
<td>1.525.53</td>
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<tr>
<td>Partial Overhead used by NCSR</td>
<td>13.16</td>
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</tbody>
</table>

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1. Publications

COMPUTATIONAL INTELLIGENCE LABORATORY

JOURNALS

2000

2001

2002

2003

2004


BOOKS/EDITORIALS

BOOK CHAPTERS

2001


2003


FULLY REFEREED CONFERENCE PROCEEDINGS

2000


2001


2002


2003


2004


PARTIALLY REFEREED CONFERENCE PROCEEDINGS

2000

2001


2003


2004


TECHNICAL REPORTS

INTERNAL TECHNICAL REPORTS

ANNOUNCEMENTS-PRESENTATIONS

2000


2001


2002


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2003


2004


**POPULARIZATION ARTICLES/MEDIA PRESENTATIONS**
SOFTWARE & KNOWLEDGE ENGINEERING LABORATORY

JOURNALS

2000

2001

2002

2003

2004

BOOKS/EDITORIALS

2000
2. K.V. Chandrinos, I.Cepulkauskaite, V.Limanauskiene, G.Navickas, B.Smolka, and P.Vasarhegyi. 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


2002


7. I. Androustopoulos, Exploring Time, Tense and Aspect in Natural Language Database Interfaces, John Benjamins

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

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2000


2001


2003


2004

FULLY REFEREED CONFERENCE PROCEEDINGS

2000


2001


2002


Language Generation” In Methods and Applications of Artificial Intelligence, LNAI 2308, I.P. Vlahavas and C.D. Spyropoulos (eds), 2002, pp. 131-142.

2003


2004


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2002


2003


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PROJECT TECHNICAL REPORTS

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2. ΜΙΤΟΣ Παραδότεο Π 11.1 "1ο Πρωτότυπο – Εγχειρίδιο Χρήσης", Ιούλιος 2000. Β.Καρκαλέτσης. Επιμέλεια έκδοσης και συμμετοχή στη συγγραφή.


4. ΜΙΤΟΣ Παραδότεο Π2 «Απαίτησης Χρηστών», Φεβρουάριος 2000. Β.Καρκαλέτσης, Κ.Δ.Σπυρόπουλος, Γ.Παλιούρας. Επιμέλεια έκδοσης και συμμετοχή στη συγγραφή.

5. ΣΧΗΜΑΤΟΠΟΙΗΣΗ (ΕΠΕΤ-ΙΙ, ΓΤ-5). Παραδότεο 3 "Λειτουργικές Προδιαρχείς και Σχεδιασμός Αρχιτεκτονικής", Οκτώβριος 2000. Β.Καρκαλέτσης, Γ.Σαμαριτάκης για το ΕΚΕΦΕ «Δ».

6. ΣΧΗΜΑΤΟΠΟΙΗΣΗ (ΕΠΕΤ-ΙΙ, ΓΤ-5). Παραδότεο 2 "Γλωσσικές Προδιαρχείς και Γραμματικός Φορμαλισμός Υπογλώσσας", Οκτώβριος 2000. Β.Καρκαλέτσης, Δ.Φαρμακιώτου για το ΕΚΕΦΕ «Δ».

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2001

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17. Γ. Πετάσης, Σ. Πετρίδης, Γ. Παλιούρας, Ε. Καρκαλέτσης, Σ. Περαντόνης και Κ. Δ. Σπυρόπουλος ΑΥΤΩΝΟΜΑ, Παραδοτέο Π3(α), «Αναφορά σχετικών με τις εξετασθείσες μεθόδους αυτόματης εξαγωγής γραμματικά κανόνων» Ιανουάριος 2001

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23. Κ. Δ. Παραδοτέο, Κ. Δ. Παραδοτέο, Κ. Δ. Παραδοτέο, Κ. Δ. Παραδοτέο, Κ. Δ. Παραδοτέο, Κ. Δ. Δημόκριτος, ΠΕΛ, ΠΕΝΕΔ, «Αναφορά για το λογισμικό (περιγραφή του συστήματος, τεκμηρίωση)» Ιούνιος 2001

24. Κ. Δ. Παραδοτέο, Κ. Δ. Παραδοτέο, Κ. Δ. Παραδοτέο, Κ. Δ. Παραδοτέο, Κ. Δ. Δημόκριτος, ΠΕΛ, ΠΕΝΕΔ, «Αναφορά για το λογισμικό (περιγραφή του συστήματος, τεκμηρίωση)» Ιούνιος 2001

25. Κ. Δ. Παραδοτέο, Κ. Δ. Παραδοτέο, Κ. Δ. Δημόκριτος, ΙΜΑΙΣΤΕΡ (ΕΜΠ), ΠΕΝΕΔ, «Αναφορά για το λογισμικό (περιγραφή του συστήματος, τεκμηρίωση)» Ιούνιος 2001
Παραδοτέο Π7 «Οδηγίες χρήσης και εγκατάστασης πρωτότυπου» Ιούνιος 2001
28. Σ. Μαρκαντωνάτου (ΙΕΛ), Ι. Μαίστρος (ΕΜΠ), Β. Καρκαλέτης, Κ.Δ. Σπυρόπουλος (ΕΚΕΦΕ Δημόκριτος), Α. Κουμπής (Unisoft), Ε. Μπράκη (ALTEC) ΣΧΗΜΑΤΟΠΟΙΗΣΗ, Παραδοτέο Π8 «Σχέδιο για την βιομηχανική εκμετάλλευση του συστήματος» Ιούνιος 2001
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55. **CROSSMARC** project (IST-2000-25366). D2.3: Report on the techniques used in version 2 of named entity recognition

56. **CROSSMARC** project (IST-2000-25366). D2.4: Report on the techniques used in version 3 of the named-entity recognition system

57. **CROSSMARC** project (IST-2000-25366). D3.3 Report on the techniques used in version 3 of fact extraction

58. **CROSSMARC** project (IST-2000-25366). D4.4 Final prototype; system documentation; evaluation report

59. **CROSSMARC** project (IST-2000-25366). D5.3 Technology Implementation Plan

60. **CROSSMARC** project (IST-2000-25366). Final Report


62. **SIFT** project (IAP-2111/27561). D3.2 Content-based filters for specific domains & languages, adapted to return ICRA style labels

63. **SIFT** project (IAP-2111/27561). D4.4 Content analysis based filters adaptation report

64. **SIFT** project (IAP-2111/27561). D5.5 Integration Platform testing report

65. **SCOFI** project (IAP- 2110/27566) D 4.2 Integration report, C

66. **SCOFI** project (IAP- 2110/27566) D 5.3 Procedures and guidelines for installing the filtering system (software documentation) + description of first set up on real site

67. **SCOFI** project (IAP- 2110/27566) D 6.1 Assessment report after first set up, R

68. **SCOFI** project (IAP- 2110/27566) D 8.2 Final report, P
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2000


2001

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2002

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11. Georgios Sigletos, Dimitra Farmakiotou, Vangelis Karkaletsis, Kostas Stamatakis and Constantine Spyropoulos, Annotating Web pages for the needs of Web information extraction applications
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2004

ANNOUNCEMENTS-PRESENTATIONS

2000


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Interaction Based on Spoken Natural Language Dialogue”, June 2001, Presented at the European Workshop on Service and Humanoid Robots (Servicerob 2001), Santorini, Greece.

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2002
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22. Τίτλος: Ανάκτηση & Εξαγωγή Πληροφορίας στο Διαδίκτυο
24. Τίτλος: CROSSMARC architecture
26. Τίτλος: CROSSMARC technology
28. Τίτλος: Κοινωνία της Πληροφορίας & Τεχνητή Νοημοσύνη

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30. Κ. Χανδρίνος, 15/03/03, Εκδήλωση INKA, Τίτλος: Ασφάλεια Περιηγημένου στο Διαδίκτυο
31. Γ. Παλιούρας, 09/05/03, Πανεπιστήμιο Αιγαίου, Τμήμα Μηχανικών Πληροφορικακών και Επικοινωνιακών Συστημάτων, Σάμιος, Τίτλος: Μηχανική Μάθηση και Εξόρυξη Γνώσης από Δεδομένα.
32. Κ. Σπυρόπουλος, 13/05/2003, στα πλαίσια του 1ου Πανελλήνιου Συνεδρίου με τίτλο «Η ΠΡΟΣΤΑΣΙΑ ΤΗΣ ΚΡΙΣΙΜΗΣ ΥΠΟΔΟΜΗΣ ΤΗΣ ΧΩΡΑΣ», Τίτλος: Έλεγχος Περιηγημένου στο Διαδίκτυο
33. Κ. Σπυρόπουλος, 22/10/03, Πανεπιστήμιο Κύπρου, Τμήμα Πληροφορικής, Τίτλος: Crosslingual Information Management from the web: The CROSSMARC project
34. Σ. Αφαντενός, Υπότροφος ΕΚΕΦΕ «Δ», 24/6/2003 και 1/7/2003, Οικονομικό Πανεπιστήμιο Αθηνών, Τίτλος: "Αυτόματη παραγωγή περιλήψεων"
35. Ε. Μηχαλάκης, Υπότροφος ΕΚΕΦΕ «Δ», 02/12/2003 και 09/12/2003, Οικονομικό Πανεπιστήμιο Αθηνών. Τίτλος: "Φιλτράρισμα ανεπιθύμητων μηνυμάτων e-mail"
36. Γ. Παλιούρας, 24/11/03, Θεσσαλονίκη MULTI MINE, Τίτλος: Εξόρυξη Γνώσης από Δεδομένα.
37. Κ. Σπυρόπουλος, 1/12/03, Τεχνολογικό Πάρκο, Ε.Κ.Ε.Φ.Ε. "Δημόκριτος", Ομιλία στην ΗΜΕΡΙΔΑ ΓΙΑ ΤΗΝ ΑΝΑΠΤΥΞΙΑΚΕΣ ΔΡΑΣΕΙΣ ΤΟΥ Ε.Κ.Ε.Φ.Ε. "Δημόκριτος". Τίτλος: "Εμπορική Αξιοποίηση Αποτελεσμάτων Ερευνών"
38. Γ. Παλιούρας, Προσκεκλημένος Ομιλητής από το Πανεπιστήμιο της Καρλσρούς στη Γερμανία, Ημερομηνία: 4/12/03, Τίτλος: Maintaining Information Integration Ontologies
39. Γ. Παλιούρας, Προσκεκλημένος Ομιλητής από την Daimler Chrysler στο Ulm της Γερμανίας, Ημερομηνία: 6/12/03, Τίτλος: Maintaining Information Integration Ontologies

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2. ΝΕΑ, αφιέρωμα στο Διαδίκτυο, Σάββατο 15 Μαρτίου 2003, Σ. Κρίκης
3. Η ΚΑΘΗΜΕΡΙΝΗ Εκπομπή "e-Business, δημοσίευμα το Σάββατο 1 Νοεμβρίου 2003, Θέμα: Ελευθερία λόγου στο Διαδίκτυο με εισαγωγή "φίλτρα"
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5. FilteriX: Ελληνικό Έξυπνο φίλτρο για το Internet, Infosec, Τεύχος 20, Φεβρουάριος 2004
7. Κων/νος Χανδρίνος, NET, Εκπομπή "Άλλη διάσταση", τηλεφωνική συνέντευξη και παρουσίαση των δραστηριοτήτων του Ινστιτούτου για φιλτράρισμα και του τεχνοβλαστού, Τρίτη 5/10/04, ώρα 11:30
8. Κ.Δ.Σπυρόπουλος, ERT3, Συνέντευξη από τη 69η ΔΕΘ
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2002

2004

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**2000**

**2002**

**2003**

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10. T. Zervos, A.A. Alexandridis, V.V. Petrović, K. Dangakis, B.M. Kolundžija, A.R. Đorđević, C. Soras, "Mobile handset radiation efficiency as a function of the antenna position relative to the human head", 8th WSEAS International Conference on Communications, July 12-13, 2004, Athens, Greece. This work appears also in


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2003

2004


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2001

2003

2004

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2. Ο Α. Αλεξανδρίδης έδωσε διάλεξη στο Πανεπιστήμιο του Βελιγραδίου με θέμα "Study of interaction between the antenna on mobile handsets and the human body – Measurement and simulation results" (Απρίλιος 2004).

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JOURNALS

2000

2001

2002

2003

BOOKS/EDITORIALS

BOOK CHAPTERS

2001

2002

2004


FULLY REFEREED CONFERENCE PROCEEDINGS

2000


2001


2003


2004


PARTIALLY REFEREED CONFERENCE PROCEEDINGS

OTHER PUBLICATIONS

PROJECT TECHNICAL REPORTS

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1. Α. Καρόδης, Α. Κούρτης, Θ. Στάππας, Ν. Παπαδημητρίου, Παραδοτέο Α2 με τίτλο “Αναλυτική έκθεση αγοράς συστημάτων ασύρματης επικοινωνίας και εφαρμογών VOD - NVOD ”, στα πλαίσια της φάσης “Καταγραφή Απαιτήσεων, έρευνα αγοράς, προμήθεια, εγκατάσταση και θέση σε λειτουργία εξοπλισμού ανάπτυξης λογισμικού” του ερευνητικού έργου "Εικονική Ταινιοθήκη: Ανάπτυξη Ολοκληρωμένου Συστήματος για την Διαχείριση και Διανομή Οπτικοακουστικού περιεχομένου μέσω Ασύρματου Συνθετικού Δικτύου", του ΠΑΒΕ 99, Μάιος 2000.
2. Α. Καρόδης, Α. Κούρτης, Παραδοτέο Α4 με τίτλο “Καταγραφή κοινών εργαλείων επικοινωνίας ανάμεσα στις δύο ομάδες ”, στα πλαίσια της φάσης “Καταγραφή Απαιτήσεων, έρευνα αγοράς, προμήθεια, εγκατάσταση και θέση σε λειτουργία εξοπλισμού ανάπτυξης λογισμικού” του ερευνητικού έργου "Εικονική Ταινιοθήκη", του ΠΑΒΕ 99, Μάιος 2000.


5. Α. Καρόδης, Α. Κούρτης, Θ. Στάππας, Ν. Παπαδημητρίου, Παραδοτέο Γ3 με τίτλο “Καταγραφή διαδικασιών και αποτελεσμάτων ελέγχου καλής λειτουργίας του δικτύου σε σχέση με το λογισμικό εφαρμογής διαχείρισης της ταινιοθήκης”, στα πλαίσια της φάσης “Σχεδιασμός και υλοποίηση ασύρματης διασύνδεσης” του ερευνητικού έργου “Εικονική Ταινιοθήκη”, του ΠΑΒΕ 99, Οκτώβριος 2000.


7. Θ. Στάππας, Ν. Παπαδημητρίου, Α. Κούρτης, Παραδοτέο Π.Ε.4 με τίτλο “Τελική Έκθεση Εναλλακτικών Αρχιτεκτονικών”, στα πλαίσια του Πακέτου εργασιών Π.Ε.4 “Εναλλακτικές Αρχιτεκτονικές” του ερευνητικού έργου "ΑΜΦΙΤΡΥΩΝ", του ΕΠΕΤ ΙΙ, Δεκέμβριος 2000.

2002
2003


2004

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27. E. Pallis, C. Mantakas, A. Kourtis, ... ,Deliverable “D1.1 Market analysis for the digital switchover”

28. ... E. Pallis, C. Mantakas, A. Kourtis, ... ,Deliverable “D2 Common modules specification”

29. ... A. Kourtis E. Pallis, C. Mantakas, ... ,Deliverable “D3.1 Access network definition”

30. ... A. Kourtis, E. Pallis, C. Mantakas, ... ,Deliverable “D3.2 Access network specification”

31. ... E. Pallis, C. Mantakas, A. Kourtis, ... ,Deliverable “D4 User equipment specification”

32. ... C. Mantakas, E. Pallis, A. Kourtis, ... ,Deliverable “D5.1 Services definition”

33. ... E. Pallis, C. Mantakas, A. Kourtis, ... ,Deliverable “D5.2 Final services definition”

34. ... A. Kourtis, E. Pallis, C. Mantakas , ... ,Deliverable “D6 Demonstrator Specification & Architecture”

35. ... E. Pallis, C. Mantakas, A. Kourtis, ... ,Deliverable “D7 Definition of trial plans”

36. ... E. Pallis, C. Mantakas, A. Kourtis, ... ,Deliverable “D8.1 Common modules design”

37. ... C. Mantakas, E. Pallis, A. Kourtis, ... ,Deliverable “D9.1 Access network design”

38. ... E. Pallis, C. Mantakas, A. Kourtis, ... ,Deliverable “D11.1 Demonstrator set-up”

Στο έργο ENTHRONE :

39. ... G Xilouris, G. Kormentzas, A. Kourtis, ... Deliverable “D01 Overall system requirements and functional architecture specification”

40. ... G Xilouris, G. Kormentzas, A. Kourtis, ... Deliverable “D02 Overall data model and interfaces definition”

41. ... A. Kourtis, G. Kormentzas, G Xilouris,... Deliverable “D03 Metadata Definition and Specification”

42. ... G Xilouris, G. Kormentzas, A. Kourtis, ... Deliverable “D04 Demonstrator Definition”

43. ... G Xilouris, G. Kormentzas, A. Kourtis, ... Deliverable “D05 IMS Architecture Definition and Specification”

44. ... A. Kourtis, G. Kormentzas, G Xilouris,... Deliverable “D19 Overall Network architecture”

45. ... G Xilouris, G. Kormentzas, A. Kourtis, ... Deliverable “D20 IPv6 Support Implementation”

37
46. ... A. Kourtis, G. Kormentzas, G Xilouris,... Deliverable “D21 End-to-end QoS Signalling & Policy based management architectures”
47. ... G Xilouris, G. Kormentzas, A. Kourtis, ... Deliverable “D22 Specification of protocols, algorithms, and components, the architecture, and design of SLS Management”
48. ... A. Kourtis, G. Kormentzas, G Xilouris,... Deliverable “D23 Perceived Quality Meters and Agents”
49. ... G. Kormentzas, G Xilouris, A. Kourtis, ... Deliverable “D24 Network Monitoring Supervisor”

**DEMO REPORTS**

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**POPULARISATION PUBLICATIONS**

2000

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2. Α. Κούρτης, Α. Δρίκας, “Σύστημα Πληροφόρησης και Εκπαίδευσης για Ατομα με Ειδικές Ανάγκες”, Ημερίδα “Ανάπτυξη Νέων Τεχνολογιών Υποστήριξης Ατόμων με Ειδικές Ανάγκες (AMEA)”, 12 Ιουνίου 2001, Αθήνα, Ε.Ι.Ε.

2004
3. Interview in the National TV broadcasting channel “ET1” in the production “Ταξιδεύοντας με το αύριο“ (“Traveling with tomorrow”) on the 8/2/2004. The subject was the new wireless communication technologies in our everyday life.
4. Interview in the private TV channel TV Crete (26 May 2004) concerning the first digital terrestrial TV transmission in Greece, which was realized in Heraklion Crete, in the frame of the FP6/IST project ATHENA. The interview concerned the perspectives of DTTV in the Greek market and its affection on the citizens.
5. Interview in the private TV channel TV Crete (21 October 2004) concerning the provision of broadband services through a digital terrestrial TV platform.
TELECOMMUNICATION NETWORKS

JOURNALS

2000

2001

2003

BOOKS/EDITORIALS

2004

BOOK CHAPTERS

2000

2002


2003


2004


FULLY REFEREED CONFERENCE PROCEEDINGS

2001


2002

2003

2004

PARTIALLY REFEREED CONFERENCE PROCEEDINGS

OTHER PUBLICATIONS

PROJECT TECHNICAL REPORTS

2000

2001

2002

2003

DEMO REPORTS

OTHER REFEREED PUBLICATIONS


ANNOUNCEMENTS-PRESENTATIONS

2001

2003

POPULARISATION PUBLICATIONS
INTEGRATED SYSTEMS

JOURNALS
2002

BOOKS/EDITORIALS

BOOK CHAPTERS

FULLY REFEREED CONFERENCE PROCEEDINGS
2002

PARTIALLY REFEREED CONFERENCE PROCEEDINGS

OTHER REFEREED PUBLICATIONS

PROJECT TECHNICAL REPORTS
2000

2002

2003
DEMO REPORTS

ANNOUNCEMENTS-PRESENTATIONS

2002

2003

POPULARISATION PUBLICATIONS
MANAGEMENT OF QUALITY STANDARDS Project

JOURNALS

2002

## COMPUTATIONAL INTELLIGENCE LABORATORY

### 1. FUNDING ORGANIZATION:
General Secretariat of Research and Technology

**Contract no:** EPAN, Action: 4.5.1

**Program:** Internal Account

**Department No:** 1106

**Partner**

**Title:** System for Digitisation and Processing of Greek Manuscripts (D-SCRIBE)

**Responsible:** S. Perantonis

**Budget of NCSR «D»:** 147.390,00

**Total Budget:** 1.016.415.00

**Starting Date:** 01/09/2003

**Duration:** 30 months

**URL:** http://iit.demokritos.gr/cil/dscribe/index.htm

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.

### 2. FUNDING ORGANIZATION:
General Secretariat of Research and Technology

**Contract no:** GSRT 433

**Program:** EPAN, Action: 4.3.6.1,Greek-Turkish collaboration

**Internal Account**

**Department No:** 1019

**Coordinator**

**Title:** The natural environment and the anthropogenic effects in internal waters - Integrated methods of follow-up and estimate of pollution repercussions. (INTERWATPOL)

**Responsible:** E Charou

**Budget of NCSR «D»:** 15.407,00

**Total Budget:** 30.813,00

**Starting Date:** 31/03/2003

**Duration:** 24 months

**URL:** http://www.iit.demokritos.gr/cil/projects/cil_prj_interwatpol.htm

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.
### 3. Knowledge Transfer for Digitisation of Cultural and Scientific Heritage in Bulgaria (KT-DIGICULT-BG)

**Funding Organization:** EC  
**Contract no:** MTKD-CT--2004-509754  
**Program:** Marie Curie Host Fellowships for the Transfer of Knowledge  
**Internal Account**  
**Department No:** 1090  
**Partner** NCSR Demokritos

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<th>Contract Data</th>
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|    | **Title:** Knowledge Transfer for Digitisation of Cultural and Scientific Heritage in Bulgaria (KT-DIGICULT-BG) | **Responsible:** S. Perantonis  
**Budget of NCSR «D»:** 4,900,00 | 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. |

### 4. Processing and presentation of information on the transport networks and the uses of land of Mediterranean countries (TECHNOLANGUE)

**Funding Organization:** EC  
**Contract no:** 2003-03-3.4-I-091  
**Program:** INTERREG III B MEDITERRANEE OCCIDENTALE  
**Internal Account**  
**Department No:** 1182  
**Partner**

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|    | **Title:** Processing and presentation of information on the transport networks and the uses of land of Mediterranean countries (TECHNOLANGUE) | **Responsible:** S. Perantonis  
**Budget of NCSR «D»:** 174,000,00  
**Total Budget:** 2,252,000  
**Start Date:** 01/06/2004  
**Duration:** 25 months  
**URL:** http://www.technolangueprojet.org/ | 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. |

### 5. Virtual Medical School and e-learning Framework (E-Medi)

**Funding Organization:** EC  
**Contract no:** EL/04/B/F/PP-148269  
**Program:** Leonardo da Vinci  
**Internal Account**  
**Department No:** 1194  
**Coordinator**

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|    | **Title:** Virtual Medical School and e-learning Framework (E-Medi) | **Responsible:** S. Perantonis  
**Budget of NCSR «D»:** 200,000,00  
**Total Budget:** 666,443,00  
**Start Date:** 01/10/2004  
**Duration:** 30 months  
**URL:** http://iit.demokritos.gr/cil/e-Medi/index.htm | 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. |
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| 6 | **Funding Organization:** EC  
**Program:** Socrates & Youth  
**Partner** | **Title:** Collaboration  
Atlantique Mediterranee AntiDopage  
**Responsibile:** Dr. S. Varoufakis  
**Budget of NCSR «D»:** 23,000,00  
**Total Budget:** 85,000,00  
**Start Date:** 10/2001  
**Duration:** 14 months  
**URL:** http://iit.demokritos.gr/cil/camad/index.htm | 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. |
| 7 | **Funding Organization:** Greek Secretariat of Research and Technology  
**Program:** Program for the Support of Research Potential  
**Partner** | **Title:** Automated Estimation of the Biological Quality of Soils  
**Responsibile:** S. Varoufakis  
**Budget of NCSR «D»:** 5,000,00  
**Total Budget:** 48,000,00  
**Start Date:** 1-1-1999  
**Duration:** 24 months  
**URL:** http://iit.demokritos.gr/cil/BIOSOILS/index.htm | The objective of this project was the development and implementation of new computer vision techniques for the automated estimation of the biocological 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. |
| 8 | **Funding Organization:** Greek Secretariat of Research and Technology  
**Contract no:** 97BE323  
**Program:** Program for the Advancement of Industrial Research (PAVE)  
**Internal Account Department No:** 574  
**Partner** | **Title:** Intelligent Camera for Texture Recognition  
**Responsibile:** S. Perantonis  
**Budget of NCSR «D»:** 16,541,00  
**Total Budget:** 66,541,00  
**Start Date:** 1/10/1999  
**Duration:** 21 months  
**URL:** http://iit.demokritos.gr/cil/574 | 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... |
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| 9. | **Funding Organization:** NCSR DEMOKRITOS - Special Account  
**Contract no:** 010/1/8226B/20.11.98  
**Program:** DHMOEREYNA  
**Internal Account Department No:** 613 |
|   | **Title:** Face recognition using biometric methods  
**Responsible:** S. Perantonis  
**Budget of NCSR «D»:** 10,800.00  
**Total Budget:** 10,800.00  
**Start Date:** 01/04/1999  
**Duration:** 24 months  
**URL:** http://iit.demokritos.gr/cil/ |
|   | 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. |
| 10. | **Funding Organization:** Lambrakis Press Organization  
**Program:** Industrial research, subcontracting  
**Internal Account Department No:** 574 |
|   | **Title:** Advanced OCR methods for digital newspaper archives  
**Responsible:** S. Perantonis  
**Budget of NCSR «D»:** 11,500.00  
**Total Budget:** 11,500.00  
**Start Date:** 01/04/1999  
**Duration:** 24 months  
**URL:** http://iit.demokritos.gr/cil/ |
|   | 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 |
| 11. | **Funding Organization:** Milward Brown UK Ltd, Initiative Media  
**Contract no:** 015/701/14.98/6-5-99  
**Program:** Industrial research, subcontracting  
**Internal Account Department No:** 663 |
|   | **Title:** Data modelling-information extraction using computational learning  
**Responsible:** S. Perantonis  
**Budget of NCSR «D»:** 11,500.00 |
|   | 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 |
### Initiative Media market research agencies.

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<th>Contract Data</th>
<th>Project Data</th>
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| 12. | **Funding Organization:** Municipality of Athens-DAEM  
**Contract no:** 015/701/1.2004/17-1-05  
**Program:** Industrial research, subcontracting  
**Internal Account Department No:** 1214  
**Coordinator:** S. Perantonis | **Title:** Advanced information processing services using computational intelligence  
**Responsible:** S. Perantonis  
**Budget:** NCSR «D»: 50.000,00  
**Project:** 50.000,00  
**Start Date:** 01/12/2004  
**Duration:** 3 years  
**URL:** | 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. |

### SOFTWARE & KNOWLEDGE ENGINEERING LABORATORY

<table>
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<tr>
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</table>
| 13. | **Funding Organization:** EC  
**Contract No:** SIAP, SIAP2003QL01 QUATRO/29097  
**Programme:** SIAP  
**Internal Account Department No:** 1189  
**Partner:** | **Title:** Quality Assurance and Content Description (QUATRO)  
**Project Manager:** C.D. SPYROPOULOS  
**Budget of NCSR:** 118.519,00 €  
**Total Budget:** 738.313 €  
**Starting Date:** 1/11/2004  
**Duration:** 24 months  
**URL:** http://quatro-project.org/ | 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. |
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<td>14.</td>
<td><strong>Funding Organization:</strong> EC  <strong>Contract No:</strong> 004218  <strong>Programme:</strong> FP6-IST “Applications &amp; Services for the Mobile User and Worker”  <strong>Internal Account Department No:</strong> 1196  <strong>Partner</strong></td>
<td><strong>Title:</strong> Mobile support for rescue forces, integrating multiple modes of interaction (SHARE)  <strong>Project Manager:</strong> G. PALIOURAS  <strong>Budget of NCSR:</strong> 445,150,00  <strong>Total Budget:</strong> 4,783,950 €  <strong>Starting Date:</strong> 1/11/2004  <strong>Duration:</strong> 36 months  <strong>URL:</strong> <a href="http://www.ist-share.org/">http://www.ist-share.org/</a></td>
<td>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.</td>
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<td>15.</td>
<td><strong>Funding Organization:</strong> GSRT  <strong>Contract No:</strong> 03ΕΑΔ-6  <strong>Programme:</strong> EPAN, Action: 8.3.6  <strong>Internal Account Department No:</strong> 1070  <strong>Partner</strong></td>
<td><strong>Title:</strong> Human Network in Knowledge Management and Discovery Technologies from Multimedia Content (MULTIMINE)  <strong>Project Manager:</strong> G. PALIOURAS  <strong>Budget of NCSR:</strong> 16,842,10  <strong>Total Budget:</strong> 180,000 €  <strong>Starting Date:</strong> 10/05/2003  <strong>Duration:</strong> 24 months  <strong>URL:</strong> <a href="http://www.multimine.gr">http://www.multimine.gr</a></td>
<td>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:  - Information Extraction from the Web  - Knowledge Discovery from the Web  - Knowledge Discovery from Corporate content  - Exploitation of ontologies  - Representation formats for metadata and ontologies  - Content based Indexing and Retrieval of image, video and 3D-graphics  - Personalised access to content</td>
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<td>16.</td>
<td><strong>Funding Organization:</strong> GSRT  <strong>Contract No:</strong> 01 PRAXE 127  <strong>Programme:</strong> PRAXE 127  <strong>Internal Account Department No:</strong> 975  <strong>Coordinator</strong></td>
<td><strong>Title:</strong> 01 PRAXE 127: “e-Content Analysis”  <strong>Project Manager:</strong> C.D. SPYROPOULOS  <strong>Budget of NCSR:</strong> 30,000 €  <strong>Total Budget:</strong> 30,000 €  <strong>Starting Date:</strong> 01/05/2002  <strong>Duration:</strong> 12 months  <strong>Extension till:</strong> 30/10/2003  <strong>URL:</strong></td>
<td>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.</td>
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<td>17.</td>
<td><strong>Funding Organization:</strong> EC  <strong>Contract No:</strong> IAP-2001-2111  <strong>Programme:</strong> FP5-IAP  <strong>Internal Account Department No:</strong> 930  <strong>Partner</strong></td>
<td><strong>Title:</strong> SIFT “Solution for Internet Content Filtering”  <strong>Project Manager:</strong> C.D. SPYROPOULOS  <strong>Budget of NCSR:</strong> 284.948 €  <strong>Total Budget:</strong> 900.000 €  <strong>Starting Date:</strong> 01/01/2002  <strong>Duration:</strong> 18 months  <strong>URL:</strong> <a href="http://www.sift-platform.org/">http://www.sift-platform.org/</a></td>
<td>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.</td>
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<td>18.</td>
<td><strong>Funding Organization:</strong> EC  <strong>Contract No:</strong> IAP-2001-2110  <strong>Programme:</strong> FP5-IAP  <strong>Internal Account Department No:</strong> 929  <strong>Partner</strong></td>
<td><strong>Title:</strong> SCOFI “Filtering the Internet by use of a Smart card”  <strong>Project Manager:</strong> C.D. SPYROPOULOS  <strong>Budget of NCSR:</strong> 259.476 €  <strong>Total Budget:</strong> 1.052.079 €  <strong>Starting Date:</strong> 01/01/2002  <strong>Duration:</strong> 30 months  <strong>URL:</strong> <a href="http://www.scofi.net/">http://www.scofi.net/</a></td>
<td>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.</td>
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<td>19.</td>
<td><strong>Funding Organization:</strong> EC  <strong>Contract No:</strong> IST-2000-25366  <strong>Programme:</strong> FP5-IST  <strong>Internal Account Department No:</strong> 858  <strong>Coordinator</strong></td>
<td><strong>Title:</strong> CROSSMARC: CROSS-lingual Multi-Agent Retail Comparison  <strong>Project Manager:</strong> C.D. SPYROPOULOS  <strong>Budget of NCSR:</strong> 847.264 €  <strong>Total Budget:</strong> 2,625,551 €  <strong>Starting Date:</strong> 01/01/2001  <strong>Duration:</strong> 30 months  <strong>URL:</strong> <a href="http://www.iit.demokritos.gr/skel/crossmarc">http://www.iit.demokritos.gr/skel/crossmarc</a></td>
<td>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.</td>
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<td>20.</td>
<td><strong>Funding Organization:</strong> EC  <strong>Contract No:</strong> IST-1999-10982  <strong>Programme:</strong> FP5-IST  <strong>Internal Account Department No:</strong> 742  <strong>Partner</strong></td>
<td><strong>Title:</strong> M-PIRO: Multilingual Personalised Information Object  <strong>Project Manager:</strong> C.D. SPYROPOULOS  <strong>Budget of NCSR:</strong> 526.742 €  <strong>Total Budget:</strong> 1,903,013 €  <strong>Starting Date:</strong> 01/02/2000  <strong>Duration:</strong> 36 months  <strong>URL:</strong> <a href="http://www.ltg.ed.ac.uk/mpiro/">http://www.ltg.ed.ac.uk/mpiro/</a></td>
<td>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.</td>
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| 21. | **Funding Organization:** EC  
**Contract No:**  
**Programme:** Greece-Cyprus S&T Cooperation  
**Internal Account Department No:** 849  
**Coordinator** | **Title:** WebC-MINE: Web usage mining from proxy/cache server logs  
**Project Manager:** V. KARKALETSIS  
**Budget of NCSR:** 8,782,10 €  
**Total Budget:** 8,782,10 €  
**Starting Date:** 01/03/2001  
**Duration:** 24 months  
**Extension till:** 31/12/2003  
**URL:** | 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. |
| 22. | **Funding Organization:** GSRT  
**Contract No:** NEO EKBAN 2–1.3-102  
**Programme:** EPET-II, Line:1.3, Action:EKBAN.  
**Internal Account Department No:** 652  
**Coordinator** | **Title:** Document filtering, information extraction and data-mining applied to financial news (MITOS)  
**Project Manager:** C.D. SPYROPOULOS  
**Budget of NCSR:** 61,029,000 GRD (179,102 €)  
**Total Budget:** 330,000,000 GRD (968,452 €)  
**Starting Date:** 01/04/1999  
**Duration:** 24 months  
**URL:** http://www.iit.demokritos.gr/skel/mitos | 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. |
| 23. | **Funding Organization:** GSRT  
**Contract No:** GSRT-PENED-2000-ED265  
**Programme:** PENED’99  
**Internal Account Department No:** Partner  
**Partner** | **Title:** Executable Intentional Languages and Intelligent Applications in Multimedia, Hypermedia and Virtual Reality  
**Project Manager:** M. GERGATSOULIS  
**Budget of NCSR:** 18,500,000 GRD (54,292 €)  
**Total Budget:** 54,000,000 GRD (158,474 €)  
**Starting Date:** 01/12/1999  
**Duration:** 20 months  
**URL:** |  |
| 24. | **Funding Organization:** GSRT  
**Contract No:** GSRT-PENED-2000-ED623  
**Programme:** PENED’99  
**Internal Account Department No:** Partner  
**Partner** | **Title:** Navigation and Control of Mobile Robot for Hospital Services (HYGEIOROBOT)  
**Project Manager:** C.D. SPYROPOULOS  
**Budget of NCSR:** 18,900,000 GRD (55,466 €)  | 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 |
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<td>25.</td>
<td><strong>Funding</strong>&lt;br&gt;<strong>Organization</strong>: GSRT&lt;br&gt;<strong>Contract No</strong>: GSRT-EPET-98 GT-16&lt;br&gt;<strong>Programme</strong>: EPET-II, Line: 2,3, Action: Language Technology&lt;br&gt;<strong>Internal Account Department No</strong>: 714</td>
<td><strong>Title</strong>: Automatic Acquisition of Named-Entity Recognition Grammars for Greek (AUTONOMA)&lt;br&gt;<strong>Project Manager</strong>: C.D. SPYROPOULOS&lt;br&gt;<strong>Budget of NCSR</strong>: 5.000.000 GRD (14.673 €)&lt;br&gt;<strong>Total Budget</strong>: 5.000.000 GRD (14.673 €)&lt;br&gt;<strong>Starting Date</strong>: 01/10/1999&lt;br&gt;<strong>Duration</strong>: 18 months&lt;br&gt;<strong>URL</strong>: <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></td>
<td>Use of grammar induction methods for the acquisition of Named-Entity grammars in Greek.</td>
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<td>26.</td>
<td><strong>Funding</strong>&lt;br&gt;<strong>Organization</strong>: GSRT&lt;br&gt;<strong>Contract No</strong>: EPET-98 GT-5&lt;br&gt;<strong>Programme</strong>: EPET-II, Line: 2,3, Action: Language Technology&lt;br&gt;<strong>Internal Account Department No</strong>: 722</td>
<td><strong>Title</strong>: Integrated environment for the development and exploitation of Greek controlled languages (SCHEMAUTOPOIESIS)&lt;br&gt;<strong>Project Manager</strong>: C.D. SPYROPOULOS&lt;br&gt;<strong>Budget of NCSR</strong>: 16.350.000 GRD (47.982 €)&lt;br&gt;<strong>Total Budget</strong>: 100.000.000 GRD (293.470 €)&lt;br&gt;<strong>Starting Date</strong>: 18/11/1999&lt;br&gt;<strong>Duration</strong>: 19 months&lt;br&gt;<strong>URL</strong>: <a href="http://www.iit.demokritos.gr/skel/schemas/">http://www.iit.demokritos.gr/skel/schemas/</a></td>
<td>SCHEMAUTOPOIESIS 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.</td>
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<td>27.</td>
<td><strong>Funding</strong>&lt;br&gt;<strong>Organization</strong>: GSRT&lt;br&gt;<strong>Contract No</strong>: Greece-France S&amp;T Cooperation&lt;br&gt;<strong>Programme</strong>: Greece-France S&amp;T Cooperation&lt;br&gt;<strong>Internal Account Department No</strong>: 769</td>
<td><strong>Title</strong>: Adaptive Information Extraction Technology (ADIET)&lt;br&gt;<strong>Project Manager</strong>: C.D. SPYROPOULOS&lt;br&gt;<strong>Budget of NCSR</strong>: 3.950.000 GRD (11.592 €)&lt;br&gt;<strong>Total Budget</strong>: 11.900.000 GRD (34.923 €)&lt;br&gt;<strong>Starting Date</strong>: 18/11/1999&lt;br&gt;<strong>Duration</strong>: 24 months&lt;br&gt;<strong>URL</strong>: <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></td>
<td>Development of a tool for the customization of Named-Entity Recognition Systems in different languages, with the use of Machine Learning methods.</td>
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| 28. | **Funding Organization:** GSRT  
**Contract No:**  
**Programme:** Greece-Italy S&T Cooperation  
**GEL No:** 683  
**Coordinator** | **Title:** Adaptive Named Entity Recognition Technology (ANET)  
**Project Manager:** C.D. SPYROPOULOS  
**Budget of NCSR:** 4,096,000 GRD (12,020 €)  
**Total Budget:** 4,096,000 GRD (12,020 €)  
**Starting Date:** 01/07/1999  
**Duration:** 24 months  
| 29. | **Funding Organization:** GSRT  
**Contract No:** 98 AD-82  
**Programme:** EPET-II, Line: 4.2, Action: Human Networks  
**Internal Account Department No:** 793  
**Partner** | **Title:** Human Network on Artificial Intelligence (Ahnet)  
**Project Manager:** C.D. SPYROPOULOS  
**Budget of NCSR:** 300,000 GRD (880 €)  
**Total Budget:** 15,000,000 GRD (44,020 €)  
**Starting Date:** 01/01/2000  
**Duration:** 18 months  
**URL:** [http://www.ainet.aueb.gr/](http://www.ainet.aueb.gr/) | Ahnet 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. |
| 30. | **Funding Organization:** GSRT  
**Contract No:** 98 AD-44  
**Programme:** EPET-II, Line: 4.2, Action: Human Networks  
**Internal Account Department No:** 861  
**Partner** | **Title:** Human Network for the Dissemination and Use of new Technologies on Data Bases (HELDINET)  
**Project Manager:** C.D. SPYROPOULOS  
**Budget of NCSR:** 900,000 GRD (2,641 €)  
**Total Budget:** 16,000,000 GRD (47,000 €)  
**Starting Date:** 01/01/2000  
**Duration:** 18 months  
**URL:** [http://heldinet.dbnet.ece.ntua.gr/](http://heldinet.dbnet.ece.ntua.gr/) | 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. |
| 31. | **Funding Organization:** NCSR  
**Contract No:** DEMOEREYNA (RESEARCH-DEMOKRITOS 99)  
**Programme:**  
**Internal Account Department No:** 624  
**Partner** | **Title:** Automatic Construction of User Communities in Digital Libraries (KOINOTITES)  
**Project Manager:** C.D. SPYROPOULOS  
**Budget of I.I.&T.:** 1,200,000 GRD (3,522 €)  
**Total Budget of NCSR:** 4,000,000 GRD (11,740 €)  
**Starting Date:** 01/01/2000  
**Duration:** 18 months | 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 |
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 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.

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| 32. | **Funding Organization:** GSRT  
**Contract No**  
**Programme:** ΕΠΑΝ ΔΡΑΣΗ 4.3.6.1 (S&T Cooperation)  
**Internal Account Department No:** 893  
**Partner** | **Title:** Study of interaction between the antenna of mobile handsets and the human body  
**Project Manager:** A. ALEXANDRIDIS  
**Budget of NCSR:** 11,400.00  
**Total Budget:**  
**Starting Date:** 01/09/2001  
**Duration:** 33 months  
**URL:** | 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 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. |
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| 33. | **Title:** Forum of laboratories implementing EU Electromagnetic Compatibility Directive (FOR-EMC)  
**Funding Organization:** EC  
**Contract No Programme:** GROWTH/Thematic Networks, FP5  
**Internal Account:**  
**Project Manager:** A. ALEXANDRIDIS  
**Budget of NCSR:** €11,947,00  
**Total Budget:**  
**Starting Date:** 01/01/2003  
**Duration:** 27 months  
**URL:** http://www.for-emc.org/ | 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: 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. 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. |

| 34. | **Title:** Antenna Centre of Excellence (ACE)  
**Funding Organization:** EC  
**Contract No Programme:** FP6/IST/NoE (Network of excellence)  
**Internal Account:**  
**Project Manager:** A. ALEXANDRIDIS  
**Budget of NCSR:** €47,000,00  
**Total Budget:**  
**Starting Date:** 01/01/2004  
**Duration:** 24 months  
**URL:** http://www.ist-ace.org/ | The main objective of this project is to structure the fragmented European antenna R&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&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&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. |

| 35. | **Title:** Flexible Wireless Network for Automation and Control Processes  
**Funding Organization:** GSRT  
**Contract No Programme:** EIIAEK (1999-2001), Internal Account | 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
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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<td>36.</td>
<td>Funding Organization: GSRT</td>
<td>Title: AMFITRYON (Interactive TV programs through computer networks)</td>
<td>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.</td>
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<td>Contract No.: EPET II</td>
<td>Scientific Responsible: A. KOURTIS</td>
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<td>Department No: 670</td>
<td>Total Budget: 836,390 €</td>
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<td>Contractor</td>
<td>Starting date: 1/4/1999</td>
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<td>Duration: 24 months</td>
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<td>37.</td>
<td>Funding Organization: GSRT</td>
<td>Title: System for information and training of persons with special needs (AMEA TOOLS)</td>
<td>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</td>
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<td>Contract No.: EPET II, Internal Account</td>
<td>Scientific Responsible: A. KOURTIS</td>
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<td>Department No: 693</td>
<td>Budget of NCSR “Demokritos”: 72,634 €.</td>
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<td>Co-ordinator</td>
<td>Total Budget: 278,796 €.</td>
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<td>Starting date: 1/6/1999</td>
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<td>Duration: 24 months</td>
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<td>URL:</td>
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</table>
A combination of Internet, Telecommunications technologies and databases 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.

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<th>Nr</th>
<th>Contract Data</th>
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<tbody>
<tr>
<td>38.</td>
<td>Funding Organization: GSRT  Contract No.: PAVE 99  Programme: PAVE 99  Internal Account Department No: 692  Contractor</td>
<td>Title: Virtual Video club : Design and development of an integrated system for the management and distribution of multimedia content through a wireless subscription system  Scientific Responsible: A. KOURTIS  Budget of NCSR “Demokritos”: 49,376 €.  Total Budget: 234,556 €.  Starting date: 1/11/1999  Duration: 12 months  URL:</td>
<td>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.</td>
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<tr>
<td>39.</td>
<td>Funding Organization: EU  Contract No.: IST-2000-26298  Programme: IST/FP5  Internal Account Department No: 850  Co-ordinator</td>
<td>Title: MAMBO (Multi-services Management Wireless Network With Bandwith Optimisation)  Scientific Responsible: A. KOURTIS  Budget of NCSR “Demokritos”: 447,000 €.  Total Budget: 4,900,000 €  Starting date: 1/1/2001  Duration: 24 months  URL:</td>
<td>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</td>
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</table>
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. 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. 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.

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<tr>
<td>40.</td>
<td>Funding</td>
<td>Title: SOQUET (System fOr management of QUality of sErvice in 3G neTworks)</td>
<td>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.</td>
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<tr>
<td></td>
<td>Organization: EU</td>
<td>Scientific Responsible: A. KOURTIS</td>
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<td></td>
<td>Programme: IST/FP5</td>
<td>Total Budget: 3,723,000 €</td>
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<td></td>
<td>Internal Account Department No: 899</td>
<td>Starting date: 1/7/2001</td>
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<td>Contractor</td>
<td>Duration: 32 months</td>
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<td>URL: <a href="http://www.soquet.leeds.ac.uk/">http://www.soquet.leeds.ac.uk/</a></td>
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</table>
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.

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 & 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&S will include the developed communication method.

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<th>Nr</th>
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<th>Project Data</th>
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<tr>
<td>41.</td>
<td>Funding</td>
<td><strong>Title</strong>: REPOSIT (Real Time Dynamic Bandwidth Optimisation in Satellite Networks)</td>
<td>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.</td>
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<td></td>
<td>Organization: EU</td>
<td><strong>Scientific Responsible</strong>: A. KOURTIS</td>
<td>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.</td>
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<td></td>
<td>Contract No.: IST-2001-34692</td>
<td><strong>Budget of NCSR “Demokritos”</strong>: 740.200 €.</td>
<td><strong>Total Budget</strong>: 4.555.000 €</td>
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<td>URL: <a href="http://www.oteconsult.gr/reposit/">http://www.oteconsult.gr/reposit/</a></td>
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<tr>
<td>42.</td>
<td>Funding</td>
<td><strong>Title</strong>: ATHENA (Real Time Dynamic Bandwidth</td>
<td>In Sevilla European Council it was indicated that two major problems (among the others) have to be solved towards eEurope 2005 and beyond: the</td>
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<td>Organization: EU</td>
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62
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<tr>
<th>Contract No.: IST-FP6-507312</th>
<th>Project Data</th>
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<tr>
<td>Programme:</td>
<td>Optimisation in Satellite Networks</td>
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<td>STREP, IST/FP6</td>
<td><strong>Scientific Responsible:</strong> A. KOURTIS</td>
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<td>Internal Account</td>
<td><strong>Budget of NCSR “Demokritos”:</strong> 573,520,00 €</td>
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<td>Department No:</td>
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<td>1123</td>
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<td>Co-ordinator</td>
<td><strong>Duration:</strong> 30 months</td>
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<td></td>
<td><strong>URL:</strong> <a href="http://www.ist-athena.org/">http://www.ist-athena.org/</a></td>
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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).

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<tr>
<td>43</td>
<td><strong>Funding Organization:</strong> EU</td>
<td><strong>Title:</strong> ENTHRONE (Real Time Dynamic Bandwidth Optimisation in Satellite Networks)</td>
<td>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</td>
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<tr>
<td><strong>Department No:</strong></td>
<td>1124</td>
<td><strong>Total Budget:</strong></td>
<td>647,580.00 €</td>
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<td><strong>Contractor</strong></td>
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<td><strong>Starting date:</strong></td>
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<td></td>
<td><strong>Duration:</strong></td>
<td>48 months</td>
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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 Universal Multimedia Access (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.

Presently, I.I.T. has developed a heterogeneous platform supporting end to end QoS, based on the concept of ENTHRONE.

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### INTEGRATED SYSTEMS LABORATORY

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<tr>
<td>44</td>
<td><strong>Funding Organization:</strong> GSRT</td>
<td><strong>Title:</strong> Virtual Laboratories Network for tele-learning and tele-working applications (VIRTULAB)</td>
<td>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</td>
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<td>45.</td>
<td>Funding Organization: GSRT</td>
<td>Title: Athletic Information inside a Stadium (ATHENS)</td>
<td>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.</td>
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<tr>
<td>Contract No.:</td>
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<td>Scientific Responsible: S. THOMOPOULOS</td>
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<tr>
<td>Programme:</td>
<td>Budget of NCSR “DEMOKRITOS”: 62.535,00</td>
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<td>Contractor</td>
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<td>46.</td>
<td>Funding Organization: GSRT</td>
<td>Title: Intelligence Access Control System for entering in athletes events (Bioathletics)</td>
<td>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.</td>
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<td>Contract No.:</td>
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<td>Programme:</td>
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<td>Internal Account Department No:1101</td>
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<td>Contractor</td>
<td>Duration: 18 months</td>
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<td>47.</td>
<td>Funding Organization: GSRT</td>
<td>Title: Toolbox for School Libraries (eSchoolLib)</td>
<td>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</td>
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<td>Contract No.:</td>
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<td>Scientific Responsible: S. THOMOPOULOS</td>
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<tr>
<td>Programme:</td>
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<td>KΤΠ, ACTION: 3.3.1</td>
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<tr>
<td>Contractor</td>
<td>Duration: 18</td>
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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.

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<tr>
<td>48.</td>
<td><strong>Funding Organization:</strong> EC</td>
<td><strong>Title:</strong> Location based services for enhancement of working environment (LIAISON)</td>
<td>The LIAISON project will turn emergent technologies, applications and services into actual business cases in order to allow key European actors to fulfill in a competitive manner the needs of workers in their daily life, for seamless and personalized 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.</td>
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<tr>
<td>49.</td>
<td><strong>Funding Organization:</strong> EC</td>
<td><strong>Title:</strong> BEE</td>
<td>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. 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.</td>
</tr>
<tr>
<td>50.</td>
<td><strong>Funding Organization:</strong> GAEC</td>
<td><strong>Title:</strong> Greek Atomic Energy Commission’s Web site</td>
<td>Development of dynamic Web site for the Greek Atomic Energy Commission, maintenance, technical support and upgrades.</td>
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<td>Nr</td>
<td>Contract Data</td>
<td>Project Data</td>
<td>Short Description</td>
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<td>51.</td>
<td>Funding Organization: GSRT Contract No.: Y2K Programme: Internal Account Department No:</td>
<td>Title: The Problem of 2000 (Y2K) Scientific Responsible: Σ. Χ. ΘΩΜΟΠΟΥΛΟΣ Budget of NCSR &quot;DEMOKRITOS&quot;: 159,602,170 δρχ. Total Budget: 159,602,170 δρχ. Starting date: 01/09/1999 Duration: 18 months URL:</td>
<td>Analysis of the Y2K problem in the NCSR “D” and implement a solution in order to face it</td>
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