e-planning seminar syllabus

1) regular graduate course, weekly schedule, 2h

"e-Planning and Digital Transition"

 together with

2) "e-Planning Seminar Speaker Series 2023"

weekly open session, as a "guest speaker series" with MIT faculty discussants, 2h

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 The goal of the course is to provide a better world-wide view and understanding of the current major issues and corresponding leading research on urban information systems (UIS) / information technology uses and impacts in planning.

 The course will follow closely the guest sessions of the ‚e-Planning Speaker Fall Series, and use them as a framework to compile a summary table of "who is who" and "who is doing what, where", concerning the identified major topics.

Each student will focus on summarizing key items related to DUSP in one single area of their interest, and thus contribute to identify relevant links between DUSP research clusters agenda and a future UIS research agenda.

 The course will require readings and Internet / library search. Each student is required to update weekly a brief personal log towards the summary table, and the class will generate a collective table with these logs, on the last two class meetings.

 Students are required to attend the weekly open sessions, as they are considered part of the class schedule.

 The course may be complemented by an "International Conference on e-Planning for Digital Transition" (co-organized by DUSP and e-Planning Consortium*) ,

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 Syllabus of regular course:

(Bibliography is in the specific separated document).

1. e-Planning Research Agenda: Roots and Concepts

2. The Qualitative Jump of the new ICT and its Impacts

3. Internet, World Wide Web and XXIc Communication

4. Theories of Information, Communication and Knowledge Representation

5. Geopolitics of Developement in the Information Society

6. The context of new ICT in Public Policy and Regulation

7. Theory of Transients: Regulated Systems vs Disruption

8. The Challenge of Privacy & Liberties vs. Eficiency & Security

9. Spatial Analysis and Geo-referencing in Planning

10. e-Government vs. Service Automation

11. "Smart Cities", Inclusion and Sustainability

12. ICT as a new dimension of Land-use Planning

13. Planning Paradigms and the role of ICT

14. ICT and Public Participation in Decision and Planning

15. ICT Ubiquity and the new Social e-Networks

16. Netiquette ‚ÄìEthics in e-Planning

(ICT - Information and Communication Technologies)

(ordering and dimension of chapters may change)

==== some details in some chapter/topics:

A. New ICT Qualitative Jump and Decision Models

- Plato's Rule re-visited

- Shannon's IT Equations and Schr$\sqrt{\partial}$dinger‚vs Negentropy

- The ICT 'enabling' factor

- Can ICT influence a decision?

- ICT impact in participation & decision theories

B. Theory of Human Nature (elements)

- The Individual-Social Organic Duality

- Critical Analysis of Maslow's Pyramid

- Cosmological Argument of Intrinsic Inequality

- Equality as a Singularity and the Asymptotic Approach

- Historical Argument of Intrinsic Cooperation

C. Theory of State (elements)

- Nature and Role of State

- Historic and Class Models

- The role of Institutions and Regulatory Framework

- Decision and Power

- Use of Force as the ultimate & decisive base of power?

- ICT and Violence vs. Acquiescence Transaction Costs

- ICT and Transient Theory in Public Policy

- ICT factor on Institutional & Regulatory Stres

D. Theory of Political Economy (elements)

- The nature of the Information & Knowledge Economy

- ICT and the concept of added-value / production factors in the new economy

- Property models and corresponding Decision models

- New ICT and balance of power ¬†between producer and consumer

E. Theory of Knowledge (elements)

- Gnoseology vs. Epistemology

- Dialetics of Nature

- The Politzer Apple Paradigm

- Knowledge Memory and Capacity Building

- The role of Knowledge in Decision

- The Institutions of Knowledge

F. Kowledge Representation Models

- Case-based frames

- Elements of Graph Theory

- Models as Trees and Graphs

- Introduction to Artificial Intelligence

- Production Rules and Expert Systems

- Inference Engines, forward and backward chaining

- Decision Trees (DT). Praticum: ¬†building a DT

- Praticum: building an Expert System

G. Theories of Decision

- Decision, Choice and Degrees of Freedom

- The Space of Solutions, and Transaction Costs

- The Prisonner's Dilemma and Nash Equilibrium

- Decision and Constraint Propagation

- The Structure of Decision and Process phasing

- Analytical Components of Decision-making

- ICT as a Multiplier of the Space of Solutions

- ICT as a denser Analytical Filter

- Decision models and the new ICT Matrix

- The Institutions of Decision

H. Theory & Praxis of Public Participation

- Administrative vs Substantive Theory

- Value Systems and Expertise

- Hirshman-Ferraz de Abreu Incremental Theory

- Tecniques of Participation and the Atribute Map of new ICT

- Models of Participation (blackboard, star, interventive)

- ICT and the new Participatory Science Paradigm

- The Institutions of Participation

I. Case-Studies. Project Examples

- IMS ‚Äì Intelligent Multimedia System in support of Public Consultation and Decision-making

- Natural Resource Management Intelligent Systems

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e-Planning Seminar 2023 "Speaker Series"

 "e-Planning" Seminar at DUSP, MIT

DUSP Seminars on Technology and the City have contributed to understanding the urban planning implications of modern information and communication technologies (ICT).

20 years after the first edition of this Seminar, The new Seminar / Speaker Series 2023 on "e-Planning" builds on this experience and focuses on the new challenges and opportunities for 'e-planning' as the reach of ICT extends far beyond the automation of traditional tasks.

Towards a research agenda on e-Planning

1. In the last 20 years, e-government efforts have become fashionable both in the US and abroad.

Initially, we saw a multitude of independent initiatives towards improving the use of ICT in public services and public administration, mostly focused on using the Internet to facilitate information access and automation of services. More recently, the trend has been toward centralization and consolidation of e-government efforts and, in some cases, a restructuring of the agencies involved.

We are now observing the emergence and consolidation of central plans and central authorities, or even multi-national regional plans and agencies, which reach far beyond the traditional government IT branches, and are developing e-government strategies and policies touching all sectors in society and all branches of government.

2. As expected, these "e-Government" efforts are impacting planning and setting the agenda for what might be called 'e-Planning'. Such a trend is forcing planners to look beyond the (relatively) simple and obvious examples of service automation or public access to government information.

In effect, will the centralized services move beyond efficient publishing and broadcasting in ways that promote meaningful dialogue among citizens and public/private interests? Shouldn't e-planning differ from e-government in that improved planning processes might involve many partners and less government?

3. This evolution raises many new questions that go beyond re-shaping services.

The trend towards a more central role of technology in Government and in Planning has come, somewhat paradoxically, as the technologies have greatly enhanced the prospects for disaggregated, spatial analyses and decentralized, community level planning.

Reduced cost and improved technology has stimulated the rapid expansion of detailed, disaggregated data about land use and ownership, geography, infrastructure, environmental conditions, etc. along with new, sophisticated analytical tools and visualization techniques to make the best use of them.

4. This dual trend poses new intellectual challenges at community/neighborhood as well as city/global levels, and it raises research questions on a breadth of issues, with emphasis on Public Participation, Privacy, Security and Freedoms, Institutional reform, and Environmental Planning. Furthermore, its study requires considerable knowledge and understanding of ICT's potential, not only of hardware and software, but also of powerful analytical tools, data mining, and communication strategies. "Big Data" is here to stay.

5. Technology is bringing to the table a new wealth of data and parameters, at multiple levels, that were not available to planners before. Besides the well known issues of data filtering and evaluation, how does this data availability impact planning processes, levels and scope? How does it relate to the emergence of "neighborhood planning"? Can ICT facilitate de-centralization of urban revitalization and development efforts? Will it enable new forms of measuring the "performance" of a City, and of City Plans? Will these measures benefit 'outside' regulators and funders or 'inside' residents and community organizations? What kind of "Smart" do we want in our "smart cities", and how citizen agenda may difer with the "smart industry" business that grew to trillions of dollars?

6. Technology is also the focus of attention in a world troubled with increased levels of insecurity and conflict / competition. How can Planning and IT contribute to a better grasp of the trade-offs among issues of security, human rights and freedoms? What are the new threats to privacy posed by the level of detail and accuracy of data collected in planning procedures and policy implementation? Do we accept the emerging "Curator" model, giving private giant technology companies, like FAcebook, Twitter, Google, the power to reguate speech?

7. Technology is facilitating citizen access to information at levels never experimented before. But this new trend towards government centrality, and IT business consolidation, may inform citizens without empowering them.
What forms of public participation in decision-making are sought, enabled or deterred by the new policies? Are current technology development policies favoring citizen participatory models, or pushing back citizens to a consumer role?

8. Technology is rapidly changing the public administration landscape. How is it impacting institutions and regulations? Is the new technology challenging the current institutional and regulatory framework for plan-making and urban development? What are adequate paths towards institutional and regulatory reform?

9. New challenges in Planning, with or without an "e", cannot be understood separated from the challenges faced by the people that embody it. What is the role of a planner in this new scheme, between e-Government oriented policies and increased citizen pressure towards interactive planning? What new technology and analytical skills and competencies are required for the new generation of planners? How can we improve our current school curricula to correspond to these new requirements?

10. 20 years ago, we raised many similar questions. What lessons did we learn from our experience? What new questions arise, that must be addressed? Where should we focus our future Research Agenda?

"e-Planning" Seminar goals

The MIT Department of Urban Studies and Planning has been at the forefront of the new thinking concerning the use of technology by planners and the impacts of technology on planning. Examples include our research on GIS web services, neighborhood information systems, and collaborative planning tools, and our use of these technologies to study urban spatial structure, community development, social capital formation, digital divide issues, and urban design methods. We must continue to provide leadership by fostering a research agenda on the next generation of problems facing "e-Planning".

One goal for this Speaker Series Seminar is to advance the research on Planning and ICT at DUSP. The topic has long been the focus of the Planning Support Systems research cluster, then inherited by the Urban Information Systems.

But the expanded ICT use and the far reaching implications of ICT choices and strategies have brought one or another aspect of ICT onto the agenda of all groups across DUSP.

The seminars are intended to facilitate dialogue across a broad cross-section of the department about some of the shared issues, methods, and implications of "e-planning".   By doing so,

we also hope to stimulate debate about an e-planning research agenda among an international community of our peers, not only in Planning but also in closely-associated fields.

In consistency with these goals, the final product of the Seminar will be a Book on "e-Planning", incorporating MIT-DUSP contribution to the new intellectual challenges we face today; and the "e-Planning" Speaker Series link to the International Conference on Public Participation and Information Technology: e-Planning for the Digital Transition (ICPPIT23), modeled after ICPPIT03 hosted by DUSP on the 10-12 November 2003, and co-organized with CITIDEP (Research Center on Information Technology and Participatory Democracy, and international non-profit).

Suggested Session Topics (still open to fine tuning).

1) Community level: e-Community Planning

2) City level: Enhancing City Performance

3) Global level: The Fading Borders between Regional, National and Local Planning

4) Public Participation

5) Privacy, Security and freedoms in the e-World

6) Urban Modeling and Urban Design

7) Environmental Planning

8) Institutional Reform

Massachusetts Institute of Technology
Department of Urban Studies and Planning

MIT-DUSP Seminar / Speaker Series on

e-Planning:
Fall 2023
chair: Pedro Ferraz de Abreu (pfa@mit.edu)

with an International Conference on
Public Participation and Information Technologies:
e-Planning for the Digital Transition
(ICPPIT23)
co-chairs:
Pedro Ferraz de Abreu (pfa@mit.edu)
Joseph Ferreira Jr. (jf@mit.edu)

Relevant links:

http://www.e-planning.org/
http://www.citidep.net/

past (still active):
http://web.mit.edu/uis/icppit03/
http://www.e-planning.org/mit2003/