**Internet Design**

**Digital Media Design**

**BA / BSc**

**Assignment Brief**

# Module: INDE601 Netscapes

# Brief set by: Stavros Didakis

# Deadline: Tuesday 16th January 2018, by 23:55

# Your Assignment:

**“Web X”**

In this assignment, you are asked (in groups) to develop a communication system that utilizes contemporary development methods for web and Internet technologies. Your system has to be sophisticated in terms of functionality, methods of development, and final outcome, and to demonstrate significant technical and creative production aspects across a range of platforms. But more importantly, your project needs to be innovative and critical by utilizing theoretical and practical research as well as implemented techniques in technological systems relevant to your field of study.

The project needs to consist of the following essential parts:

* **Prototype**: You are asked to create a physical prototype that will be able to communicate information to your main network/platform. The prototype can be informed by the area of the Internet of Things, and you should develop the physical prototype using digital fabrication (lasercutting, 3d-printing), human-computer interaction, sensor implementation, programming of a digital/electronic system (MCUmicrocontroller), and to establish a communication protocol (Bluetooth, Wi-Fi, etc).
* **Network Architecture**: For your network architecture, you need to develop a communication platform that takes care of all the information transmitted, processed, and received (server-scripting, databases, web sockets, APIs, and so on). Your main concern is to develop the system as efficiently as possible, by utilizing same time contemporary development methods for web and Internet technologies.
* **End-User Development**: In addition, your system needs to have a frontend, that is, a method of communicating information back to the user, either in the form of a graphical user interface (GUI), data visualization methods, or by utilizing any other form of real-time graphics (2D/3D), VR, or sonification processes.

# Deliverables:

At the end of the module, each group needs to provide ONE electronic submission on the DLE that includes the following content:

1. A zip file that includes:
   1. A ~1000-word report (.docx) in the style of a conference paper that describes the project. This should include:
      1. Introduction (general overview of this project, hypothesis or questions that were created at the beginning of the project – Why is this work important? What are you trying to achieve? Aims and objectives). [100 - 150 words]
      2. Background (all related references that have inspired this work, or any philosophical, theoretical, or practical context that this development is based on. Include at least 5 references here) [300 words]
      3. Methodology (the development practice and structure that was followed to make this project. Any specific techniques or technologies used should be mentioned here). [300 words]
      4. Analysis / Discussion of Results (provide a critical analysis of your work, so as to explain what works and what doesn’t, what needs to be adjusted or needs to be done in a future update. [200 words]
      5. Conclusion (Recap all previous content, summarize, explain what is the main outcome of this work, and close the report) [100 - 150 words]
      6. References section (include all references here – 10 to 20)
      7. Annotated Bibliography section (all books you have reviewed for this project)
      8. Appendix section – here you are asked to provide the following:
         1. Project development related content, such as timeplanning, budget analysis, description of resources used
         2. Photo documentation of your projects
         3. Break down of duties and responsibilities amongst team members (if this is an individual project, then there is no need)
         4. Any additional related links for your work (final website, blog links, GitHub links, etc)

* 1. A folder with digital photos of your sketches and designs that demonstrate your development process (minimum of 10 photos, in high-quality JPEG format, 72dpi, resolution of 1280x720px or 720x1280px)

* 1. A folder with digital photos and screenshots that display your final work/installation/system (minimum of 10 photos, in high quality

JPEG format, 120 dpi, resolution of 1920x1080px or

1080x1920px)

* 1. A folder that contains all related code used for this work, including dependencies, libraries, media files, and so on. Make sure that you include instructions to explain functionality (README file), and that all code has been documented thoroughly.

1. All code files that you have used for this project (i.e. HTML, CSS, Javascript, and so on), have to be submitted in addition as individual text files. Thus, for example if there is any code written in a JS file, you need to submit a TXT file version and submit it individually on DLE. Repeat for all files that include code that you have developed for this work.

1. If there are any outputs related to large media content (i.e. video or sound work), you will have to copy them in a USB stick and submit them to the Students Office (RLB109) before the deadline.

1. All projects need to have their individual GitHub link. All team members need to demonstrate that they have participated in the development of the GitHub project, either by coding, upload of media and design content, documentation, and so on. Optionally, you may have a project website as well. Project links need to be submitted here as an individual TXT file.

# Marking Criteria:

For this project, you are asked to develop a system that utilizes a range of software and hardware programming and design techniques to create an innovative communication system. The following criteria will define the way in which your marking will be processed.

1. Research

How relevant is your research in relation to the brief, and how effectively you demonstrate this through the practical development, written explanation (report), and final outcome? What resources did you find/use, and how effective are your research strategies in relation to the project’s development?

1. Development Process

This aspect defines the strategies followed and actions that were taken from start to finish of your project. This includes strategies that were used, level of engagement, experimentation and refinement processes, creative and effective use of relevant systems and technologies, as well as innovative practices.

1. Industrial, Artistic, or Social Impact

Your final system is expected to be innovative and provoking, or to suggest a new way of appreciating, understanding, or using related technologies for reaching a particular goal, either artistic, social, or industrial. It is expected to see the innovative and creative elements in this work that make excellent use of research, technological and/or artistic development, that informs in an sophisticated way the area of practice.

1. Technical Expertise

By exploring the technical media you have selected for your project, it is expected that you will deliver content that demonstrates excellent practical set of skills, utilizing professional methods to deliver a cuttingedge system. This may be either a well-written and high-level code, a cleverly-weaved multimedia composition, or a well-refined clear UI design (to name a few).

1. Documentation

The documentation is a central part of your work, and you need to be thorough in terms of collecting, analysing, and storing information both for your reports and personal logs, but also for your group project and public repositories. All content needs to be thoroughly examined, tested, designed, and analysed so that it reflects good organizational and professional skills.

Following is a matrix that displays the criteria summarized:

* Research and Critical Analysis (1) (2)
* Development Process (2) (3) (4)
* Industrial, Artistic, or Social Impact (2) (3)
* Technical Expertise (3) (4)
* Documentation (report, photos, sketches, blogs, GitHub) (2) (3) (5)

# Classification of criteria

1. **Research and Investigation:**

The ability to employ appropriate research method(s) to investigate, locate, select, evaluate and utilise data and source material as part of an effective research process.

1. **Critical Context:**

Understanding of the historical, critical and theoretical frameworks relevant to the work in particular or the practice as a whole. The ability to locate work within a broader cultural context.

1. **Innovation and Creativity:**

Innovation and creativity through practice by the dynamic integration of existing forms, the generation of new forms, or the radical appropriation and utilisation of components or the critical re-evaluation and appropriation of concepts. The demonstration of an experimental approach, risk taking, the speculative use of rational and intuitive thought.

1. **Practical Competence and Realisation:**

The ability to realise a project, through the demonstration of an understanding of aims, audience, and context. Responsiveness and effectiveness in the deployment, utilisation and manipulation of appropriate skills, technologies and processes to fit the available resources. The ability to manage the process by which the product of the module is realised. The ability to successfully and appropriately integrate critical context and practical competence into a coherent and legible whole.

1. **Analysis and Critical Evaluation:**

Demonstrating an ability for problem analysis, to understand, articulate and interpret the nature of the assignment, its context within the Programme and its broader context. To evaluate work through formative and summative critique.

To learn from mistakes and problems and effectively utilise knowledge gained.