

**The City of Bogotá's Institute for the Arts, through its Line in Art, Scientific Culture, Technology and City, and its project Plataforma Bogotá**

**Extend an invitation to the laboratory**

***Network Interventions: This speed has weight***

Coordinated by:  
*Nathan Gates*

**1. Description**

This laboratory is aimed at exploring the realities of the internet's physical dimensions that are seldom acknowledged in its daily use. The user-end experience of the internet creates a particular perception of the network that can be far removed from the material infrastructure that makes this network functional.

The key area of interest for this laboratory is the relationship between the experience of a technology, the internet, and the underlying structure that makes that experience possible. We will specifically look at the role of the material infrastructure and physical networks that makes the internet possible. The political, technical, ideological and socio-cultural intricacies of a network that physically spans the globe is not perceptible in its everyday use.

The fundamental idea of the laboratory is the linking of the way a website's information is presented, to the physical condition of the device serving that webpage. In this lab we will work on producing a prototype object that is positioned as a thinking-device that assists in discussing the internet's physical dimension, and the role it plays in how information is shared and communicated. This device is a starting point to experience the material dimensions and physical contexts of the internet which are played down in favour of a metaphorically rich design level view of technological systems i.e: the Cloud, and considering at what cost this is done.

**1.1 General Objectives**

Experimentation. Exploration. Documentation. Presentation.

The device that will be created in this laboratory will be a physical web server, unlike the bulk of web servers online this device will be made to be contextually aware of its surroundings and its own physical state. Through the use of various sensors the server will be aware of its physical location, its orientation in 3D space, its temperature, light quality of its environment etc. All this information creates a dynamic relationship between the client and server that changes in real-time as the physical device is interacted with.

This relationship will be visible in the information exchange between the client and server. Physically manipulating the server will alter the nature of the information (the website) being presented, in real-time, according to character of those interactions.

Participants shouldn't feel limited to technological interventions. The intended outcome of the lab is the creation and presentation of a body of knowledge interested in the physical dimensions of the internet, and its role in how information is communicated and consumed. This can take many forms with the device functioning as the catalyst.

## **1.2 Methodology**

The general objective of this laboratory is to explore the physical dimensions of the internet by making it part of the way in which it presents us with information. This is something that happens regardless of whether we notice it or not. As users we are mostly interested in the literal information in the content we are consuming, but the manner in which we consume this information: on what kind of device (laptop, or feature phone for example), where we do this (public wifi / at an internet cafe), the kind of content we engage etc., reveals another kind of information that is more closely tied to the material nature of the internet and our status as users in relation to it. The devices we will be constructing in the laboratory are meant to emphasize the relationship between the content of what you are viewing and the underlying physical nature and contexts of the enabling mechanisms that make it possible

Through a combination of technical sessions and discussions we will construct a device capable of basic sensing of the physical world, and which has the ability to use this information to change the content/structure of a simple website. This device will be a small web server that uses sensors to alter the webpage it is serving based on information it collects on its current physical surroundings. This device will be used as a thinking tool to explore the relationship between the internet as we experience it through our browser, and the internet as material infrastructure that exists in the physical world and is subject to all the forces that come with that.

Participants will explore this relationship by experimenting with the devices in different parts of the city, exploring how different physical environments can affect the device and therefore affect the way in which information can be communicated over the web. This process is aimed at examining the material aspects of the internet to shed light on the political, economic, technological aspects, to name a few, that shape the internet as a global communication technology. Participants will need to find suitable means to document their individual processes as they unfold and reflect on it to gather any insights.

The expected outcome of this project is the creation of a body of knowledge in the form of a physical device positioned as a research tool, coupled with documentation of the devices production and the process of discovery it enables through its use by participants.

The project will be made publicly available and exist as an artifact of an alternate process of knowledge production, as well a form of knowledge in-and-of-itself. It will be available for anyone to access and build upon.

### **1.3. Laboratory's Program**

Tuesdays and Thursdays

3-6pm

#### **Week 1 - Introduction + War / driving / Walking**

April 19

Introduction to myself and my practice, overview intention of the lab.

Mapping the city via its wireless network.

#### **Week 2 - Prototype and Research Phase**

April 24 and 26

The device is meant as an object to think with, so the process will begin with assembling a basic working version of the device to test and experiment.

We will put together the most basic possible operating version of the device so that we can interact with it and begin thinking about how it can be used.

#### **Week 3 - Data Center visit and Internet Cafe visit**

May 1 and 3

Visiting two different places in which the internet is used to see how different physical environments affects internet use, what makes the internet 'work' and seeing what the material part of the internet looks like. Start exploring and testing with the devices in different spaces and thinking through the device.

#### **Week 4 - Website alterations and refinement**

May 15 and 17

Refining your webpage and its relationship to the sensor data you are collecting. Experiment with the relationship between the content (website viewed by audience) and physical state of the hardware enabling this (the web server).

#### **Week 5 - Discovery and practice-led research phase:**

May 8 and 10

This week will be spent refining the sensor and electronic aspects of your device based on what the participants have learned and thought about over the previous weeks. Take the device into public and on the move to better understand the sensor data. Experimenting in different spaces and testing out different modifications.

#### **Week 6 - Presentation**

May 24 and 31

The outcomes of the lab will be presented. The format will be decided on through this process and depend on the outcomes of our research.

## **2. Directed to:**

Artists, web developers and programmers, architects, urban designers, dancers, writers, and people in general interested in humanities, the arts, technology and science. Knowledge of Basic web development, Javascript (NodeJS), Arduino and physical computing will be very useful, but it's not mandatory. Although this is not a purely technical Laboratory the research process is one that involves using and understanding technical components to engage more philosophical ideas and social realities. The devices being built are experimental platforms that will require further refinement and customization..

## **3. Those who can participate:**

Legal natural person, colombian or foreigner, 18 years old or older and a resident of Bogotá

## **4. Invitation Schedule**

**Opening: March 12th**

Inscription and reception of documents:

From March 12th to April 6th

At the following email: [laboratoriosinteractivos@idartes.gov.co](mailto:laboratoriosinteractivos@idartes.gov.co)

Publication of those selected:

April 16th

Consult results at the following website: [www.idartes.gov.co](http://www.idartes.gov.co)

## **5. Applications**

Within the time frame stipulated by the inscription schedule, send an email to [laboratoriosinteractivos@idartes.gov.co](mailto:laboratoriosinteractivos@idartes.gov.co), with the following information:

Subject: *Network Interventions Laboratory*

Body of email: Full name of the applicant and ID number.

Attached: a single PDF with the following information:

- 1) Reasons or motivations to participate in this laboratory (2 paragraphs maximum)
- 2) CV, and reference to the main projects realized in relation to the theme of the invitation.
- 3) Photocopy of the ID
- 4) Valuable experiences / skills in line with the Laboratory theme: Arduino, Physical Computing, NodeJS, Electronics
- 5) The ability to work in groups and with others

Available spots: 15

## 6. Suggestions

By sending the inscription e-mail it is implied that the guidelines of the invitation are accepted.

Within the period of inscription and reception of documents, only the first email sent will be taken into account. Therefore, if in this email all the documents asked for in point 5, the inscription won't be taken into account.

Before sending your email for inscription and documents, verify that the attached document can be read in WIndows, Mac and Linux.

## 7. Selection criteria

1. Experience and trajectory related to the objectives of this laboratory.
2. Interdisciplinary profiles of the applicants, with the aim of creating an interesting dynamic within the laboratory.
3. Interest in the interaction between art and technology, related to projects of artistic intervention.
4. Hard skills relevant to the laboratory

### 7.1 Selection percentages

1. Experience and trajectory related to the objectives of this laboratory.	35%
2. Interdisciplinary profile of the applicant, with the aim of creating an open and explorative dynamic within the laboratory.	30%
3. Interest in the interaction between art and technology, related to projects of artistic intervention.	25%
4. Skills relevant to the laboratory	10%

## 8. Evaluations of projects

Those inscriptions that fulfill the specifications of the invitation will be valued by Nathan Gates, coordinator of the laboratory, Raquel Solórzano Cataño and Juan Pablo Pacheco Bejarano, coordinators of Plataforma Bogotá, who will review the projects and will select those who will participate in the laboratory. This decision will be recorded in a document where the selection criteria will be registered.

Once the deliberation is done and with the selection document signed by the evaluating committee, the City's Institute for the Arts - IDARTES will take the recommendation and publish an administrative act to which the law applies, as long as they adjust to the corresponding normative (bla bla bla, more legal jargon).

#### **9. Duties of those selected**

- Inform the City's Institute for the Arts in a written way and with due anticipation, if you can't attend the laboratory.
- Assist on time to the laboratory, activities, press, public presentations and others.
- Assist to 90% of the activities in order to receive the certificate.
- The others noted by the Institute. For more information:  
[raquel.solorzano@idartes.gov.co](mailto:raquel.solorzano@idartes.gov.co) or [juan.pacheco@idartes.gov.co](mailto:juan.pacheco@idartes.gov.co)

#### **10. Laboratory coordinated by:**

Nathan Gates

I am an artist currently based in Johannesburg.

My interests in process, knowledge, agency, and structure find their expression in the growing use of technology in our day-to-day lives. In my practice I'm concerned with my capacity to choose and act in environments that are becoming ever more organized with the spread of consumer technologies and the accompanying formal structures that emerge within, or enable this process of organization. With varying degrees of success and intent, I try and turn the act of getting beaten up by computers and similar structures and processes into something everyone can enjoy.

I have a Master's Degree in Digital Arts from The University of the Witwatersrand, where I have also lectured in physical computing and networked media practices.

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