INVOICE

Math Practice, LLC

Brooklyn, NY 11201



April 21, 2014

Prepared For:

Joel Ferree (jferree@lacma.org) Art + Technology Program Manager MUSEUM ASSOCIATES d/b/a LACMA

Invoice Number: MP-LAC-001-14

<u>Project</u>

2014-2015 ART + TECHNOLOGY LAB ARTIST PROJECT: In Search of Personalized Time

Date	Description	Amount
04/15/2014	Research: April – August, 2014 (Research and design, Initial visit to LACMA)	
Total		
Amount Due		

Payable Upon Receipt Please make all checks payable to Math Practice LLC.

In Search of Personalized Time: April~July

From April to July, we will be building the conceptual and technical foundations for our project, tentatively titled In Search of Personalized Time.

Our research will be conducted on several levels, ranging from close readings and reflections on theoretical texts to experimenting with various softwares and technologies, as well as holding conversations with makers and thinkers whose work pertains to the project. Funds may be allocated for site visits and meetings with such figures.

Hardware and software prototypes will be developed through experimental design methodologies. While the major R&D will be executed in the second phase of the project after presentation to LACMA Art + Technology Lab in early September, the initial phase will serve as critical preliminary work for designing the final project's interface.

Artist's fees will be provided to support creative exploration.

Also, we are hiring a research assistant for the project who will provide administrative support, in technical, project management, and editorial capacities.

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Math Practice, LLC

Brooklyn, NY 11201



Prepared For:

Art + Technology Program Manager MUSEUM ASSOCIATES d/b/a LACMA

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Invoice Number: MP-LAC-002-14

<u>Project</u>

2014-2015 ART + TECHNOLOGY LAB ARTIST PROJECT In Search of Personalized Time:

Production: September, 2014 - January, 2015

Date	Description	Amount
09/01/2014	Materials	
	Fabrication	
	Subcontractors	
	Assistants	
	Spaces	
	Artist Fees	

Total

Amount Due

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Summary report

From April to August of 2014, we conducted intensive research for In Search of Personalized Time (ISOPT). We focused on developing the concept of 'personal sense of time'.

The research culminated in a number of public events, first event was 'Real-time Film Club' in July 15th at The Orbital, New York City. The event was a hybrid experience of film screening and discussion as an exercise of simultaneity.

The second event was 'Timekeeper Invention Club' in August 23 in The Orbital and in August 31st at Art + Technology Lab at LACMA. Both workshops provided us a great opportunity in advancing our project with the public participation. The final workshop at the Lab was also our first face to face encounter with LACMA public.

In working with the advisors of Art + Technology Lab, we engaged in conversation with Chris Malachowsky at NVIDIA, and met with Phillipe Pare at Gensler and Chris DeFay and Max Maxwell at Google on our trip to LACMA in August. We are considering in engaging in further collaboration with the advisors throughout the year.

At this point, we are working on second phase of the project under the title of 'prototype development'. We will focus on rapid prototyping ideas and building growing library of objects, software and hardware, and ideas for performance and games for ISOPT. We will work on collaborative experiments in a shared workspace at 33 Flatbush ave, with interest in diverse technical topics such as parallel computing with NVIDIA's CUDA platform, FPGA and electronics, and conceptual research about currencies and macro economies in relation to time. Part of the fund will be utilized to hire assistants and subcontractors to help with prototyping.

At the end of the our development phase in May 2015, we will report our progress to the Art + Technology Lab and the advisors. We are hoping to do public program on May 30th at LACMA Art + Technology Lab, as well as public spaces at LACMA.

INVOICE

Math Practice, LLC

New York, NY 10003



June 3, 2015

Prepared For:

Art + Technology Program Manager MUSEUM ASSOCIATES d/b/a LACMA

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<u>Project</u>

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Invoice Number: MP-LAC-003-15

2014-2015 ART + TECHNOLOGY LAB ARTIST PROJECT

In Search of Personalized Time: Production: January, 2015 - July, 2015

Date	Description	Amount
02/01/2015	Fabrication	
	Subcontractors	
	Travel and Accommodation	
Total		
Amount Due		

Payable Upon Receipt Please make all checks payable to Math Practice LLC. Second Summary Report for Art + Technology Lab, LACMA

In Search of Personalized Time Project by Taeyoon Choi and E Roon Kang 7.8.2015

In the second phase of In Search of Personalized Time (I–S–O–P–T), we started developing hardware and software prototype – the Personal Timekeeper – a portable hardware that measures and displays personal times. The Personal Timekeeper is also networked, sending the user's time data to a central server through GSM(Global System for Mobile) network. The central server will collect these personal time records, and use the data to compute Consensus Time. The mathematical formula for a Consensus Times will be determined through a round table discussion at the end of each day of the event, and will be broadcasted through NTP (network time protocol) server.

We have brought in Charlotte Stiles as a project assistant, and also started working with hardware engineer Jon Moeller, to design the hardware and set the groundwork for server-side system architecture. Custom PCB was made, and the hardware assembly is near its completion. On the software side, we are also working with Wonyoung So and Anastasis Germanidis on setting up NTP servers and developing libraries for the Consensus Times on the website and on general user's devices. We've used significant part of the second installment of the grant to pay for their work.

The public event, Circle of Moment Measurement, is planned to showcase the Personal Timekeeper on two days – July 18th and 19th. The first day will be working with the fellow artists and advisors of the lab, whereas the second day will be open to public, working with general museum audience. Jon, Taeyoon and E Roon will stay in Los Angeles in preparation of the event, starting from July 13th. The expenses relating to their travels and accommodations were paid with the second installment of the grant.

At the final stage of I-S-O-P-T, we are organizing a workshop/performance at LACMA in July 18 and 19. We are ready to launch the project hardware and website, and focus on creating an immersive and participatory experience for the workshop participants. The final installment will make possible the workshop and documentation, and also pay for the engineers and assistants for the project.