UX+AI: Developing Intelligent Interfaces

by Jordan Deja

Digital Media Summit (DiMSum) Cagayan 2018
Cagayan State University
April 20-21, 2018

CENTER FOR
COMPLEXITY &
EMERGING
TECHNOLOGIES

AIPilipinas

Hi, I'm Jordan!

Assistant Professor at DLSU CCS
Center Head of DLSU COMET
Co-Founder of DLSU UX Society
Co-Founder of AIPilipinas
Organizer, UX Philippines
CXO, CRTR Live

Im an Academic, who mixes UX & AI

DE LA SALLE UNIVERSITY MANILA

College of Computer Studies

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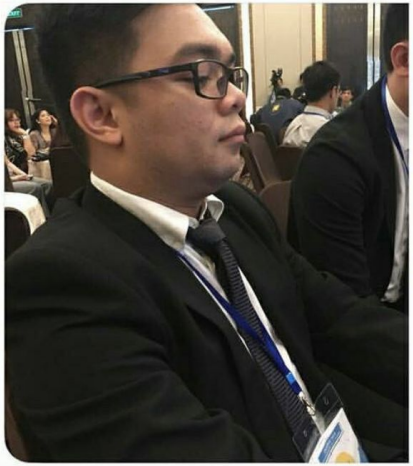
UX PH

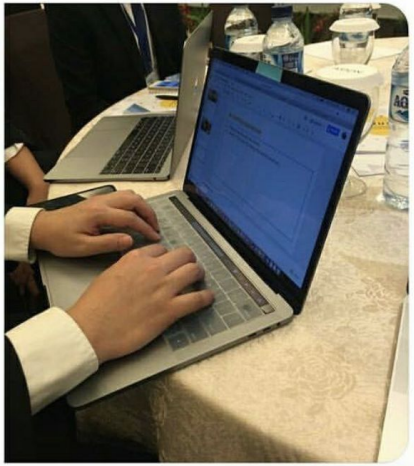
AIPilipinas

Have you seen this guy?

Blaise Cruz
@finelined_

If you think you're good at cramming, my prof makes his slides and prepares his presentation for an international conference IN THE CONFERENCE ITSELF





http://aipilipinas.com

Empowering organizations to drive value
from **Artificial Intelligence**

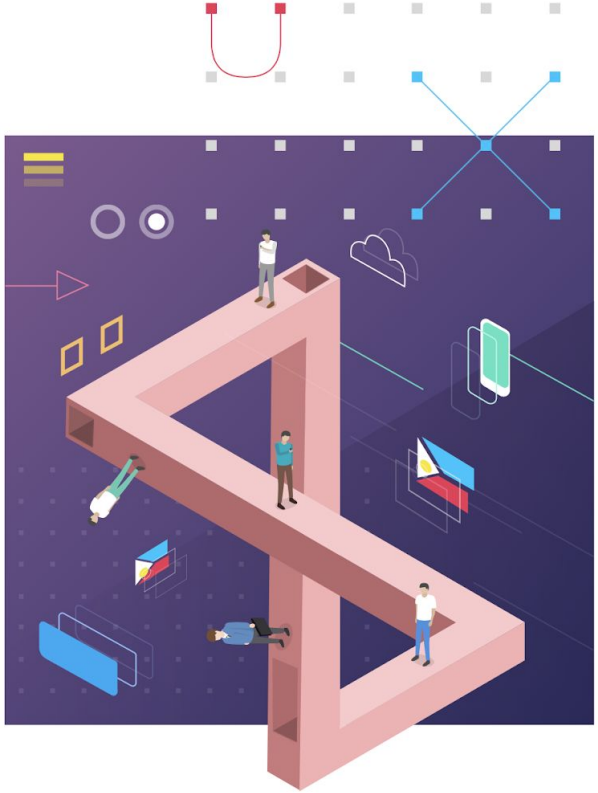
AIPilipinas

http://uxphilippines.com

UXPH 2018:
Navigating Design Crossroads

May 26 (Sat) - 27 (Sun)

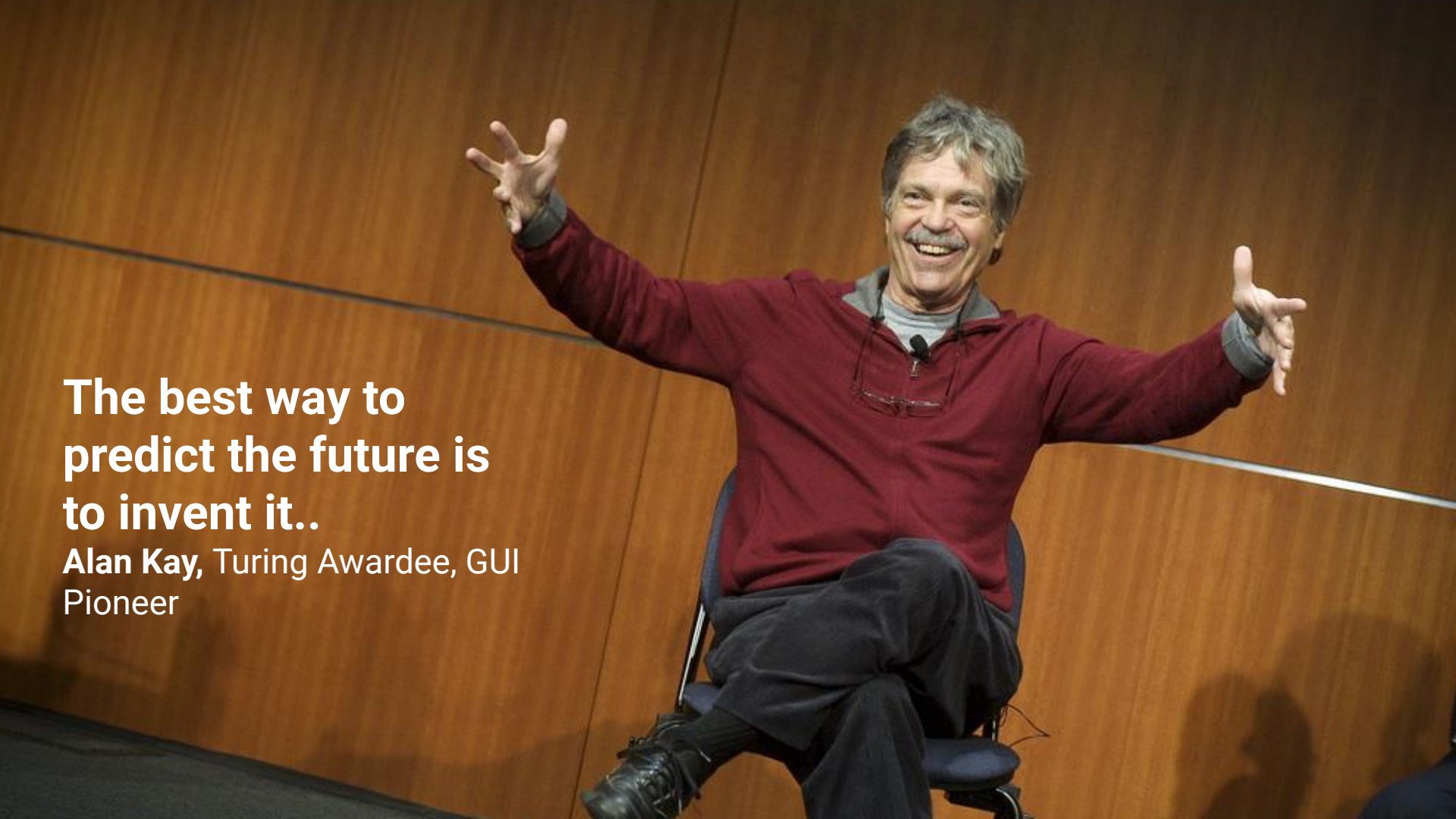
The Globe Tower
Bonifacio Global City
Taguig, Philippines



WHAT IS UXPH2018?

UXPH2018 Design Conference is a collaborative conference that showcases the possible applications of Design Thinking in technology, business, health, government, and many other fields. It brings together design professionals, UX practitioners, and design stakeholders of these sectors to participate in a dialogue on how Design Thinking can be applied and how it can benefit The Philippines.

Following from key insights and learning in the highly applauded "UXPH2017: Design for a Better Philippines", UXPH 2018 will focus on experience reports, challenges, emerging trends, and the context of design with the theme, "UXPH2018: Navigating Design Crossroads".



The best way to predict the future is to invent it..

Alan Kay, Turing Awardee, GUI Pioneer

what I’m **currently** working on

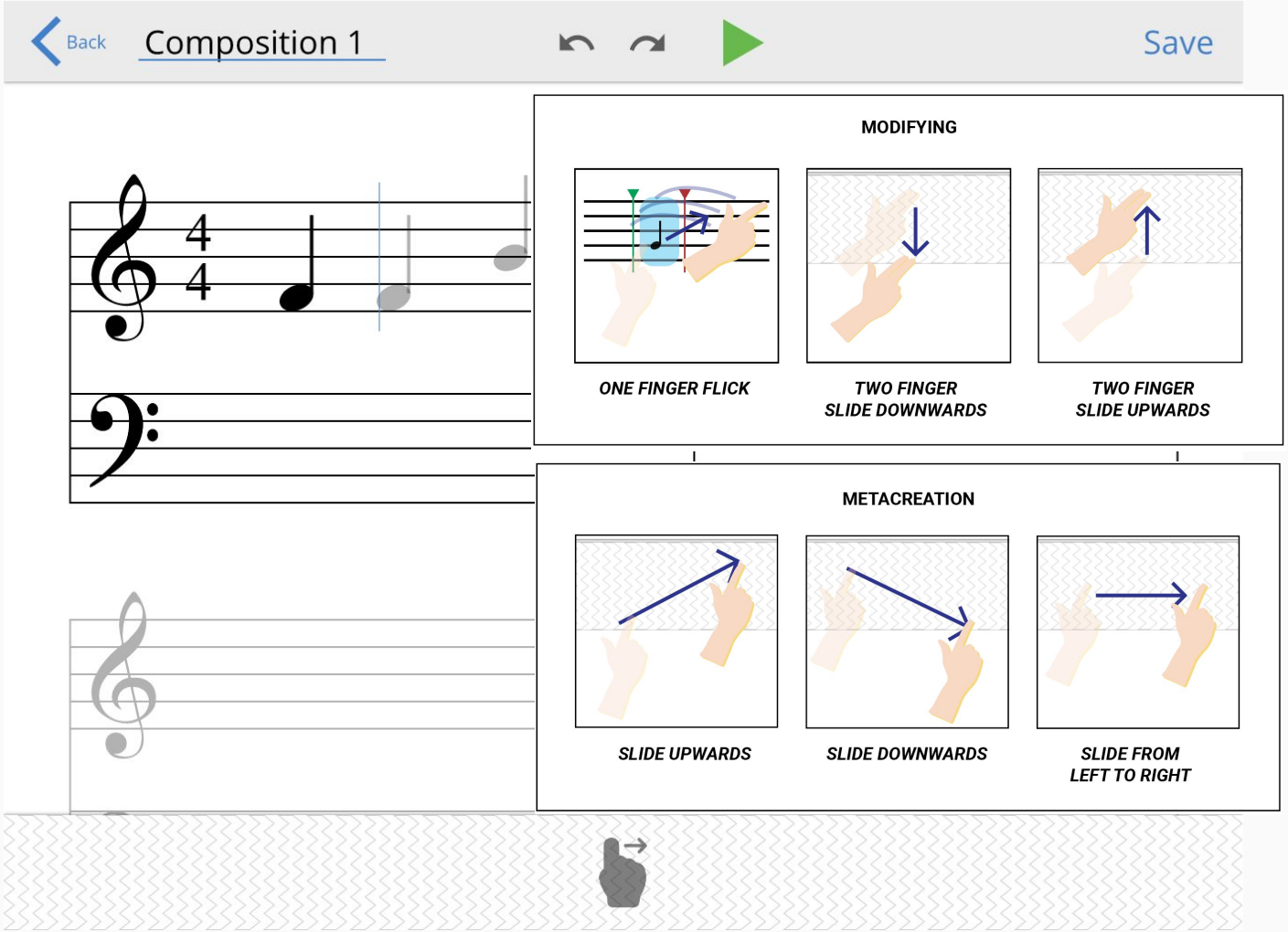
Two-Arm Myo-based Translation Tool for Filipino Sign Language

Currently in modelling phase

Early work has been accepted for publishing in the upcoming HCI International 2018 Conference in Las Vegas

In partnership with:

SDEAS
School of Deaf Education and Applied Studies
De La Salle-College of Saint Benilde



An iOS Musical Composition Tool with Intelligent Emotion Creation

Currently in Phase 1

Early work has been accepted for publishing in the upcoming HCI International 2018 Conference in Las Vegas and is currently being presented in the SEA CHI 2018 Conference in Canada

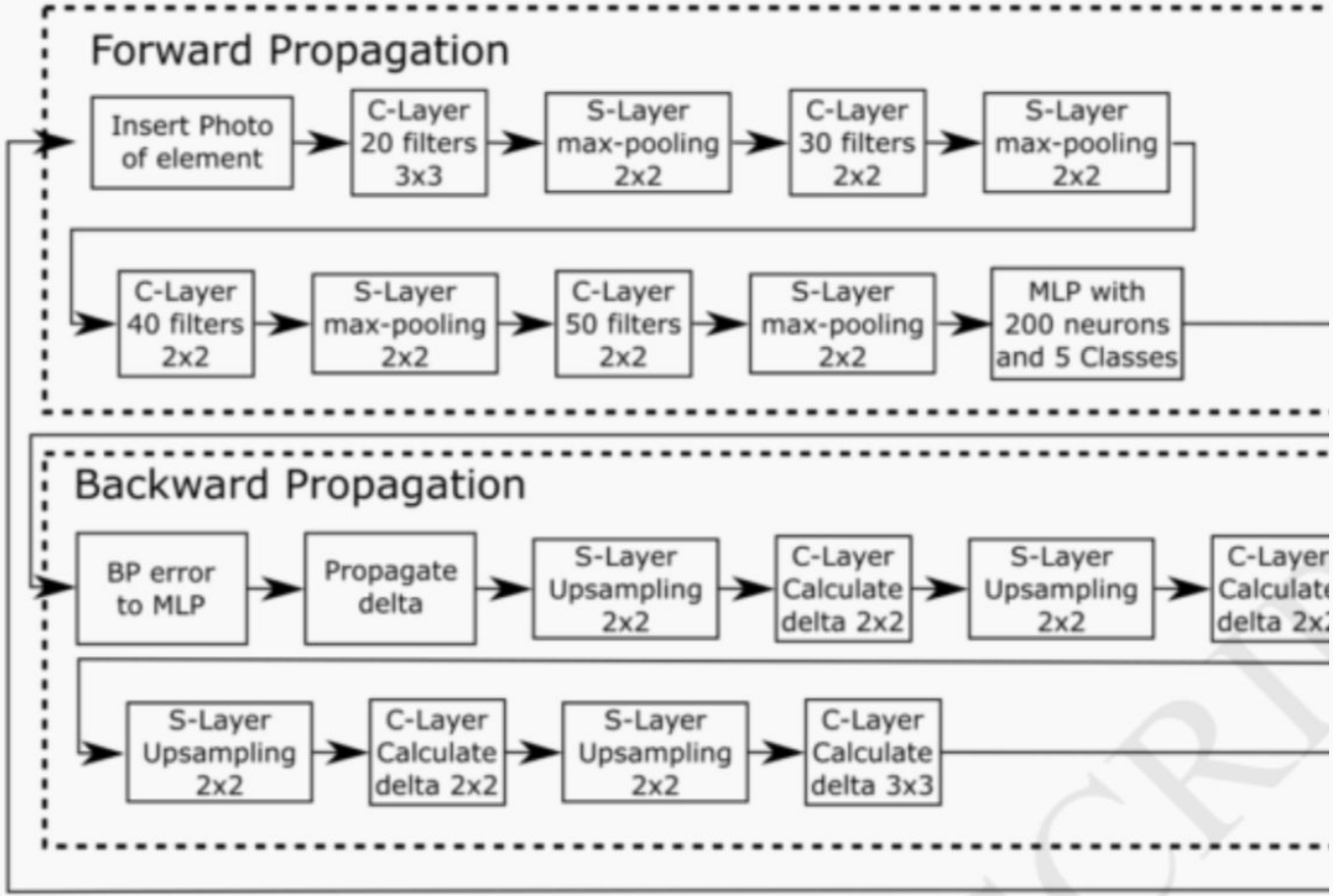
Using Brainwaves in Experience Design for TV Advertising

Currently in Phase 2

Initial findings have been published in the ACM Digital Library as proceedings of the CHIUxID2018 Conference in Indonesia

In partnership with:

NUWORKS INTERACTIVE



AutoX: An Automated Way of Evaluating Heuristics in Webpages using CNN

Currently in Phase 1

Early architecture is has been presented in the ACM CHI SEA CHI 2018 Conference in Canada

An experience isn’t always a click, a view, or a download. But it’s always accompanied by a feeling. An emotion.

People **use** apps everyday.

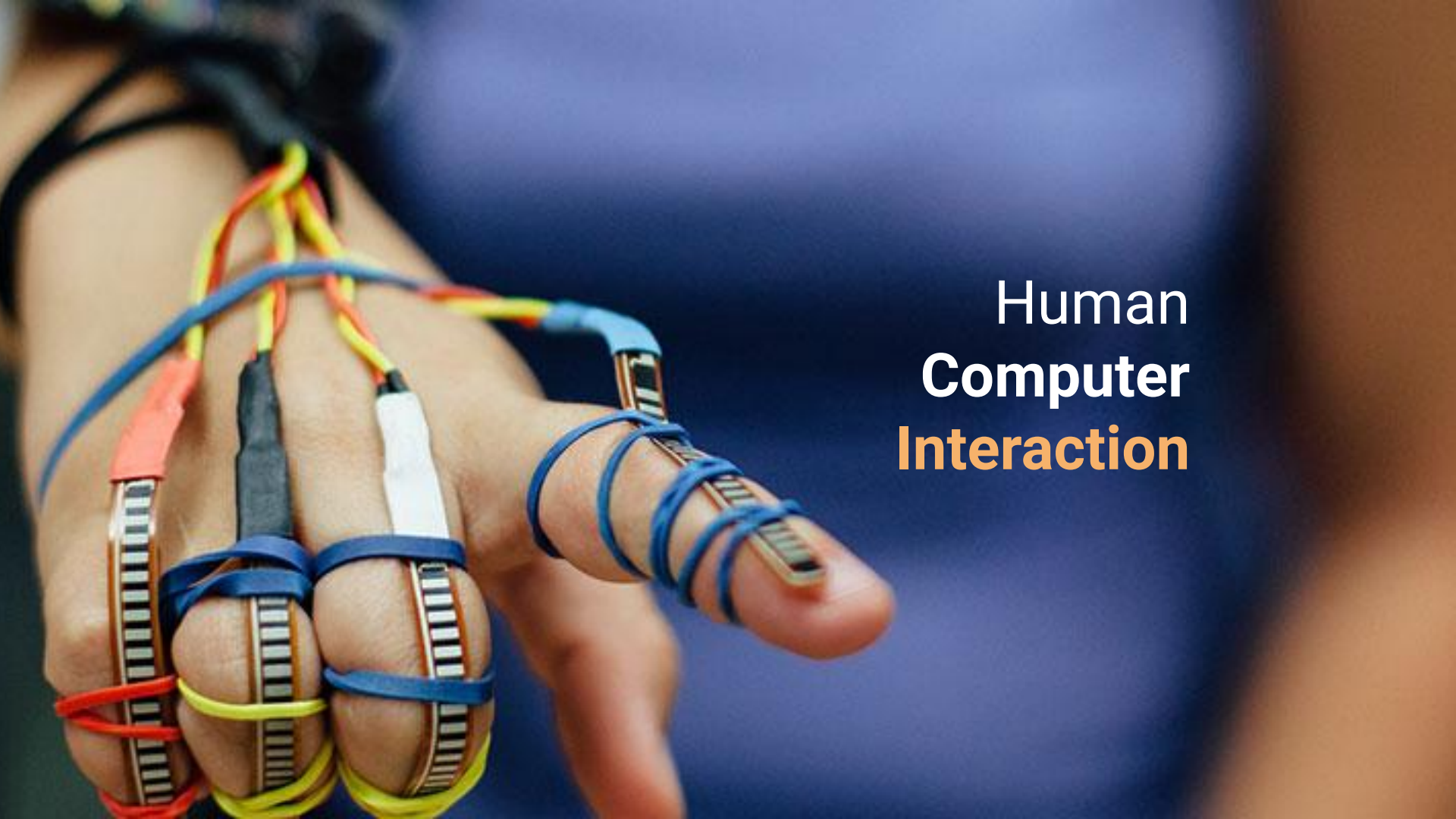
How Much Time Do People Spend on Their Mobile Phones in 2017?

over **4 hours** a day.

40 minutes in Youtube
35 minutes in Facebook
25 minutes in Snapchat
15 minutes in Instagram
1 minute in Twitter

on average of course.

We **build more** apps and as we build more features, **user needs** continuously **change**



Human **Computer** **Interaction**

HCI? Di ba interface lang un?!

UX? Front end lang na pina sossy

I CAN SHOW YOU DA WAE
imgflip.com

Computer Science

Graphics. Visualization. User Interfaces. Information Architecture.

Psychology

Social Psychology. Behaviorial Sciences. Cognitive Load. Human Factors.

Engineering

Ergonomics. Industrial Design.

Design

Interaction Design. Design Thinking. User Experience.

Human Computer Interaction

Refers to the discipline involving the study of computers, interfaces and their interaction with humans.

UI/UX <> HCI

UI =/= UX

how?

UI, UX.

Remove the “U”, what do you have left?
Are they still the same?

How to start when everyone around is into AI?

don’t just think **outside**...

Listen to people’s problems
then solve them.

Don’t help AI replace them. Build products that will help them.

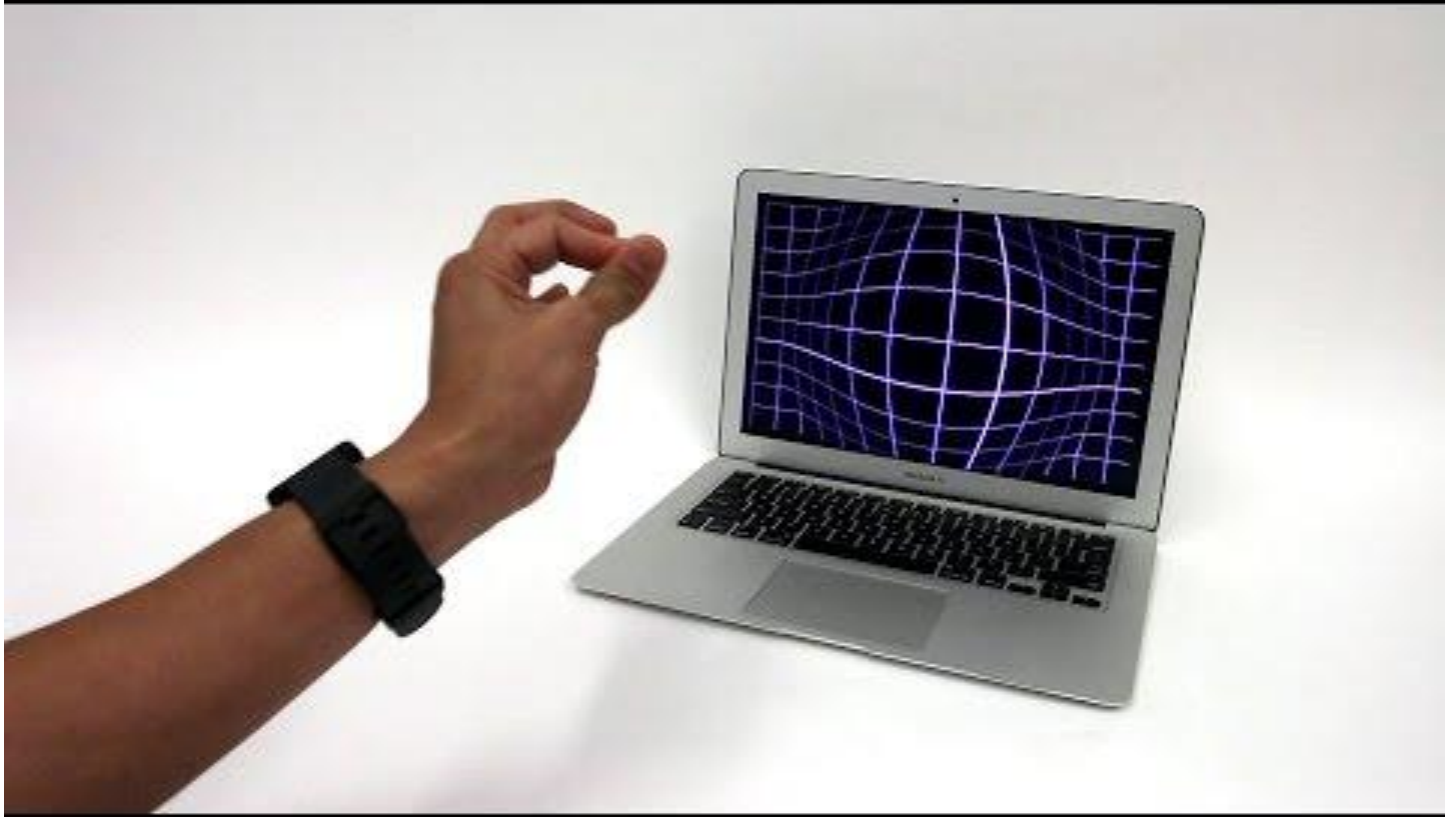
“The key is to build the perfect **human-computer teams**”

Shengdong Zhao
National University of Singapore

Given all the **noise around us** is there a way we can **help the user focus** on the **task at hand**?

Use **noise** to create **sound-based** interactions

https://www.youtube.com/watch?v=Poi0MeASmuY



By using **noise and signals** we can **augment** our natural day to day **routines**

https://www.youtube.com/watch?v=fpKDNle6ia4

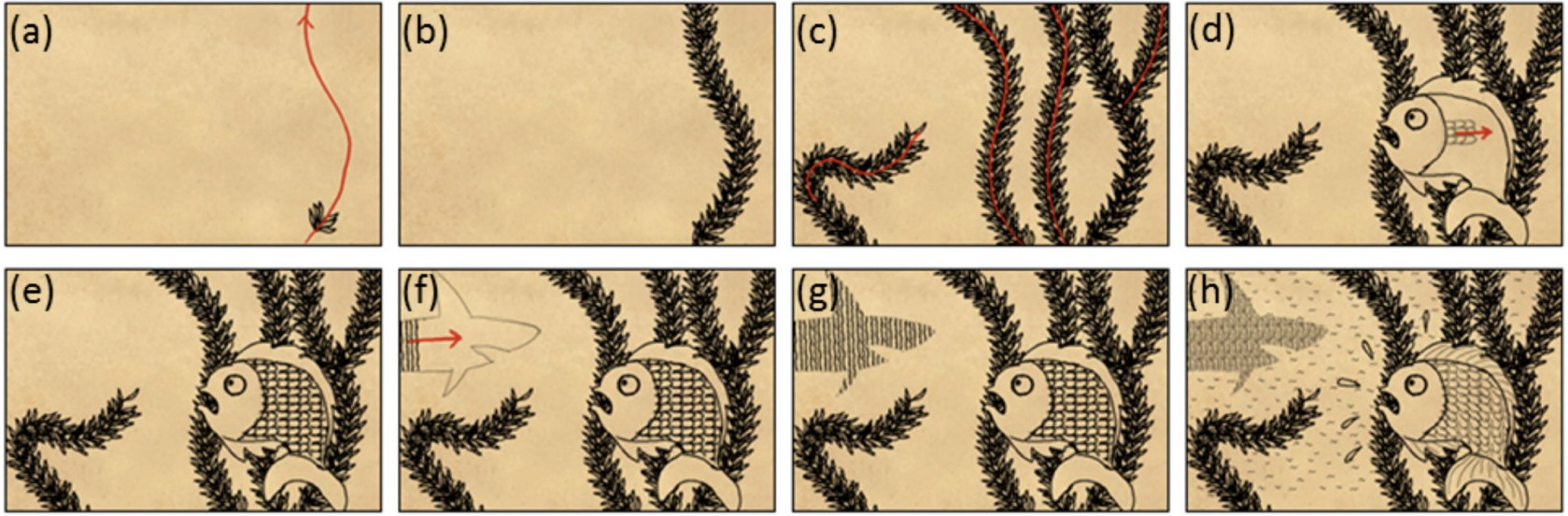
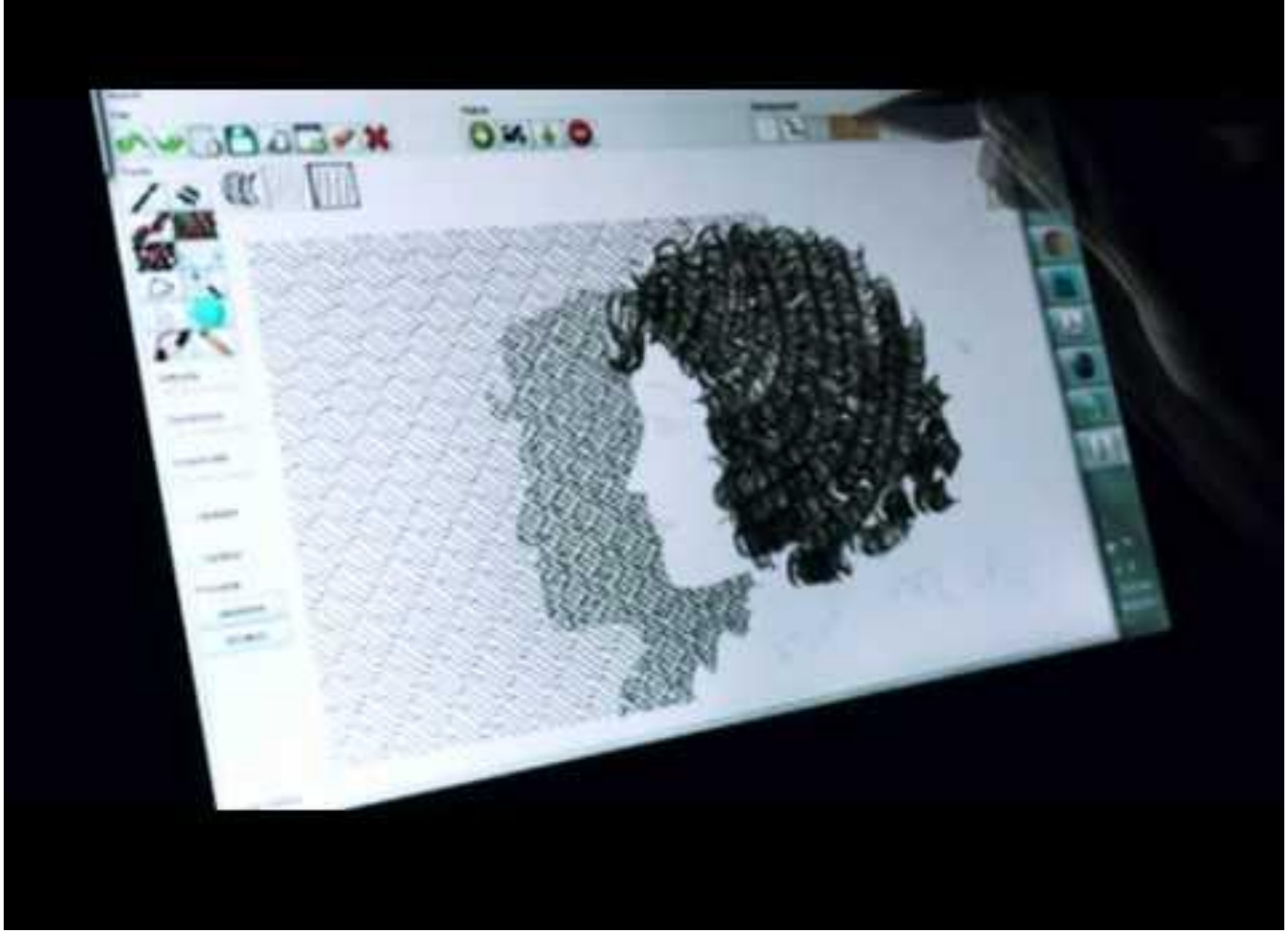


Figure 1: The steps of a pen-and-ink illustration with Vignette from scratch (a) Draw leaf strokes (black) and gesture (red) (b) Texture created from gesture and strokes(c) More textures (d) Draw scale strokes and gesture (e) Region filed with scales (f) Draw hatching strokes and gesture (g) Fill region with hatching (h) Final illustration created in minutes.

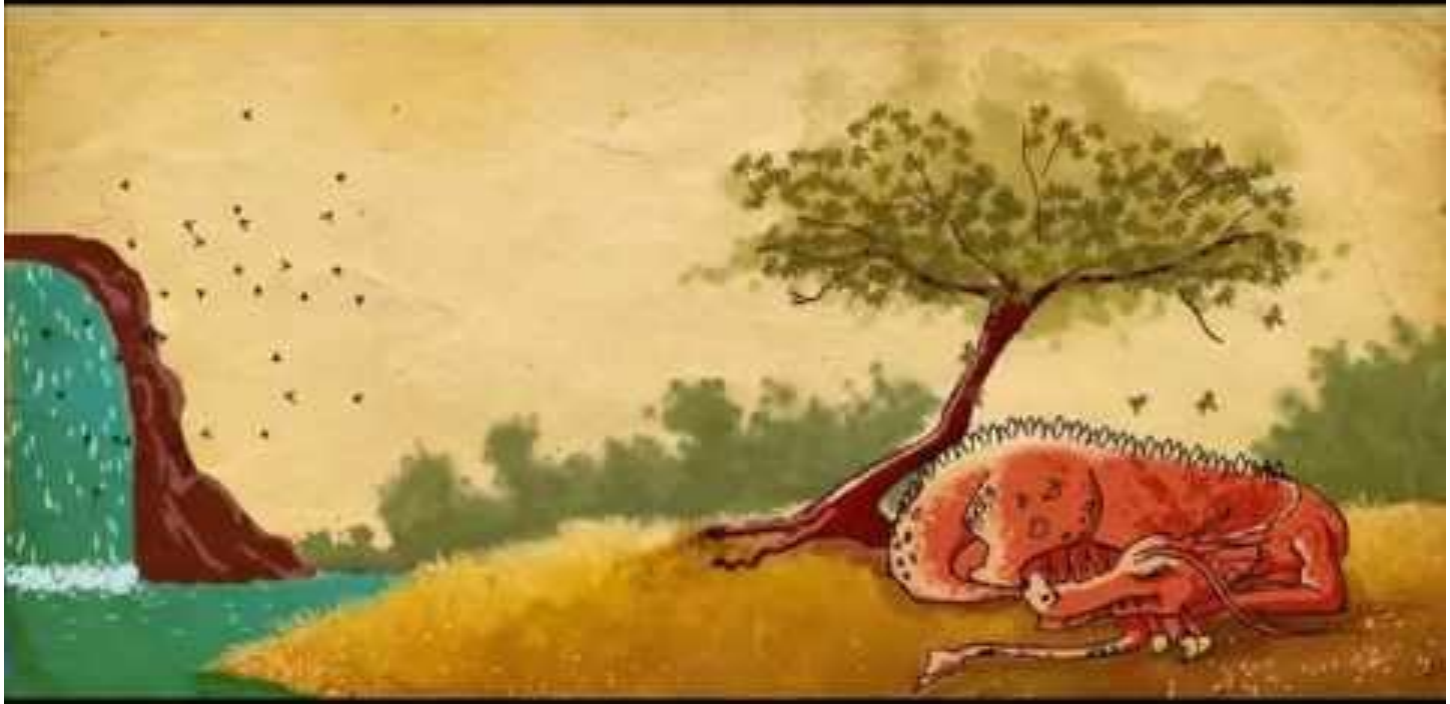
“Can the computer **do the rest** of the strokes **for me**?”

https://www.youtube.com/watch?v=R4NnYNsOcio&list=PLl81bJ6jBktwh0BrSYn2prx9WQ7GnJDPK&index=2



can we **animate** without repeating?

https://www.youtube.com/watch?v=l84YK1_ytks&list=PLI81bJ6jBktwh0BrSYn2prx9WQ7GnJDPK&index=3



Eyes-free

Can we navigate thru the menu without looking at it?

https://www.youtube.com/watch?v=bATkA0Usoio

SqueezaPulse

Can we make interaction more convenient and fun?
Can we make storytelling feel natural?

https://www.youtube.com/watch?v=wmBz1dl1nC8

SQUEEZAPULSE

Adding Interacxtive Input to Fabricated Objects
Using Corrugated Tubes and Air Pulses

Liang He, Gierad Laput, Eric Brockmeyer, Jon E. Froehlich

UNIVERSITY OF MARYLAND

If I do UX+AI what career options **are there**?

UXPH

SAMSUNG RESEARCH AMERICA

Research at Google

Disney Research

AUTODESK.

Noah's Ark LAB

Adobe

Planes **dont flap** their wings to fly, but
birds **dont take off** from trees either...

A car can **run faster** than a cheetah but it can **never climb** a tree..

Thank you!

Contact me or tweet me for other concerns, questions, or comments.

jordan.deja@dlsu.edu.ph
@jrdndj
/in/jrdndj

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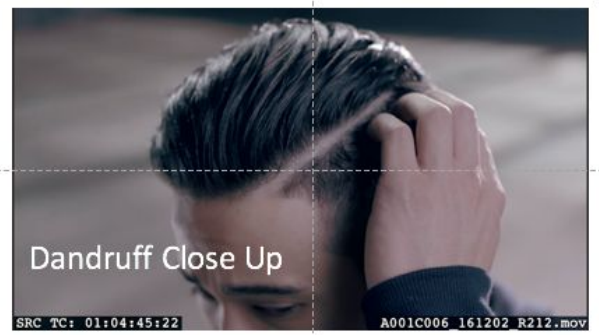
2GIRLS

Bedroom
SRC TC: 03:13:47:19
A003C019_161202_R212.mov

Motor Bike
SRC TC: 01:18:27:03
A001C034_161201_R212.mov

Dancing
SRC TC: 02:01:18:08
A002C001_161202_R212.mov

Dandruff Guy
SRC TC: 01:31:49:16
B001C015_161202_R20B.mov


Dandruff Close Up
SRC TC: 01:04:45:22
A001C006_161202_R212.mov

CLEAR
DANDRUFF-PROOF
YOUR STYLE
No visible flakes with regular use

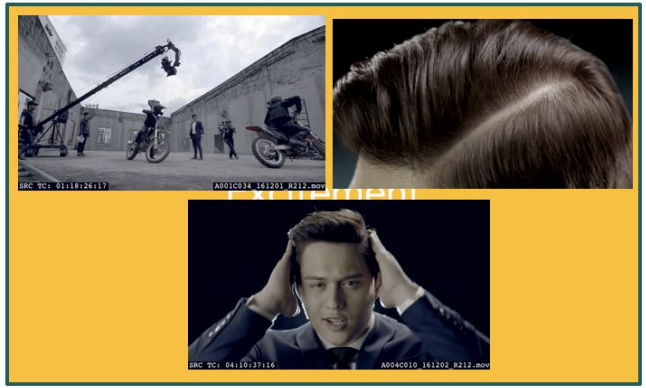
Party / Singing
SRC TC: 03:13:01:16
A003C004_161201_R212.mov

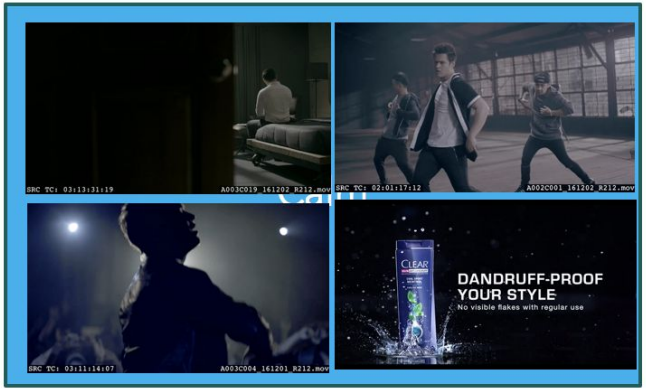
Clean Scalp

Nothing to Hide

Arousal

Valence





CLEAR
DANDRUFF-PROOF
YOUR STYLE
No visible flakes with regular use

Sample scene analysis: Bike scene

Avg. Valence: 1.024 (high)

Avg. arousal: 0.512 (high)

Affect: Possible Excitement

Pocket recommendation: **keep**

Notes: confirms interest for bicycles

EEG values display 30% spike of values on arousal for the next 3 seconds from this scene

Sample scene analysis: Enrique dance

Avg valence:1.01 (high)

Avg arousal: 0.481 (low)

Affect: Definite Calm

Pocket recommendation: **dont**

Notes: EEG values 2 seconds before and 2 seconds after hardly changed (also for most selected scenes from 15s videos)

Sample scene analysis: scalp scene

Avg. Valence: 0.998 (low)

Avg. Arousal: 0.5101 (high)

Affect: Probable Disgust

Pocket recommendation: **keep**

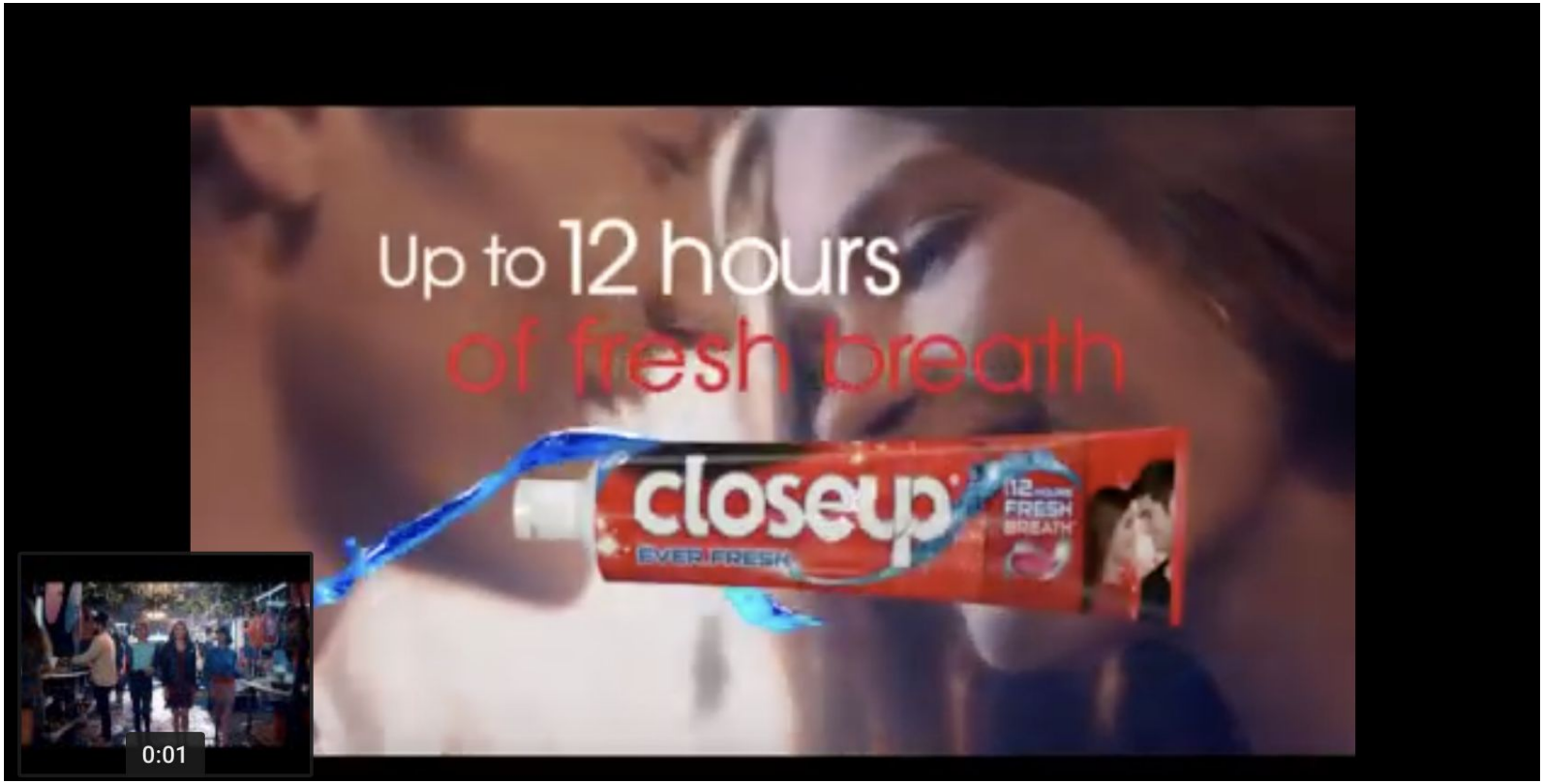
Notes:

Some participants remembered dandruff on this scene even there was none as this was offline.

UNSTOPPABLE
DANDRUFF-FREE FRESHNESS
no visible flakes with regular use

no visible fades with regular use

CloseUP #CloserThanEver Indonesia vs Philippines



“Kilig” scene which is only shown in the PH version