

Game Developers Conference® | March 9-13, 2010 | Moscone Center | San Francisco, CA

SERIOUS GAMES SUMMIT



GDC¹⁰

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Lit - A Mobile Game for Health

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Principal Investigator: Dr. Charles Kinzer



Funded by:

Robert Wood Johnson Foundation Health Games Research Grant

A brief history of mobile phones

GDC 10

Learn. Network. Inspire.

THINK
SERVICES

Just talk (and text sometimes)



A brief history of mobile phones



Talk, text, take pictures, play simple games



A brief history of mobile phones



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Learn. Network. Inspire.

**THINK
SERVICES**



Engaging your senses with technology

So the question is...

Can we harness this technology for smoking reduction?



Why smoking?

It is the leading preventable cause of death in the United States.



Source: RWJF, Centers for Disease Control and Prevention

Why smoking?

It is the leading preventable cause of death in the United States.

Someone dies every eight seconds from tobacco use.

Source: RWJF, Centers for Disease Control and Prevention





Smoking statistics



44.5 million smokers (20% of the population)

438,000 yearly deaths

Source: Centers for Disease Control and Prevention

Statistics on quitting



31.5 million smokers want to quit (70%)

17.8 million tried to quit last year (40%)

So how can we support the 40%?

Source: Centers for Disease Control and Prevention





LIT - A mobile game intervention for smokers

a mobile game
designed around breath therapy
with a breath interface
that substitutes for smoking



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Breath therapy

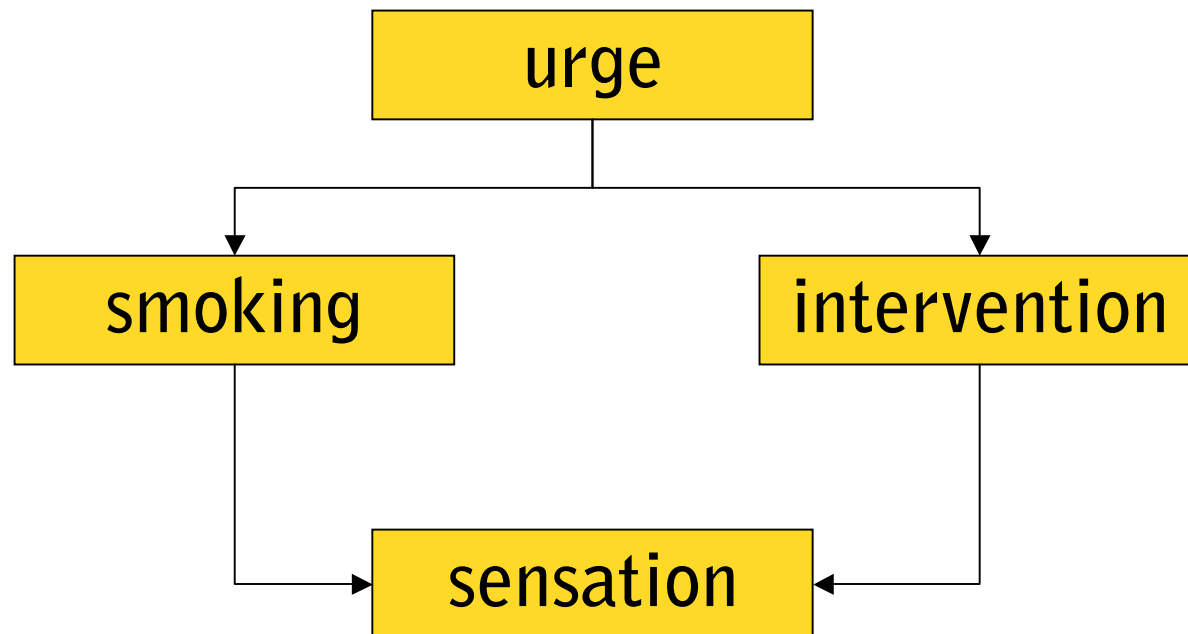
Clinically proven as an effective intervention
for smoking.



Source: O'Connell, Hossein, Shwartz & Leibowitz, 2007



How it works



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Design considerations

Accessibility

Lower barriers

Context-sensitive

Motivation



Intervention characteristics

Accessibility

Cheap or free

Lower barriers

Easy to use

Context-sensitive

Ubiquitous

Motivation

Playful

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Breath therapy as an intervention

Cheap or free

Easy to use

Ubiquitous

Playful



Breath therapy as an intervention

Cheap or free

No equipment

Easy to use

Need training

Ubiquitous

Body-activated

Playful

Boring

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Why Lit?

Cheap or free

Self-administered

Easy to use

Adaptive software

Ubiquitous

Smart phone

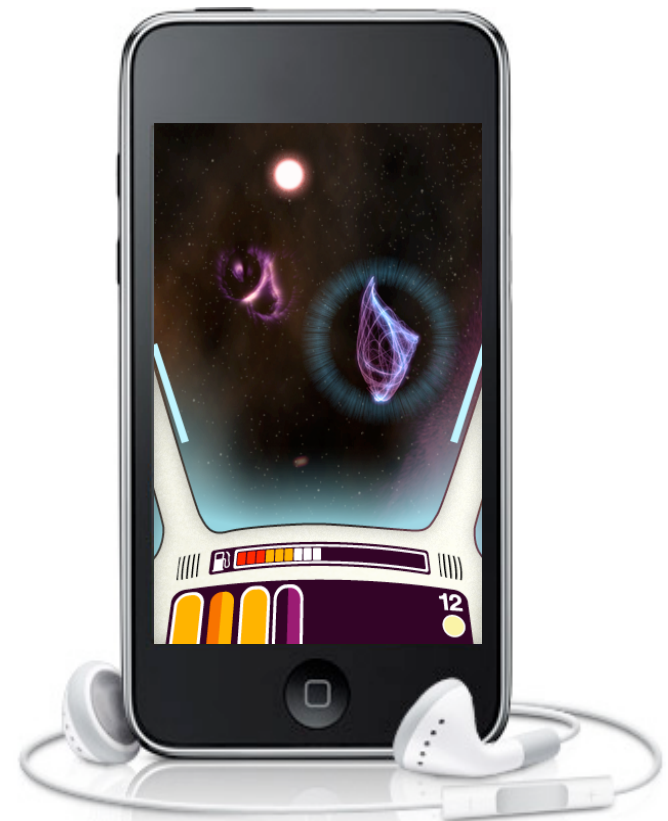
Playful

Game

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Feature 1

Microphone
For breath input



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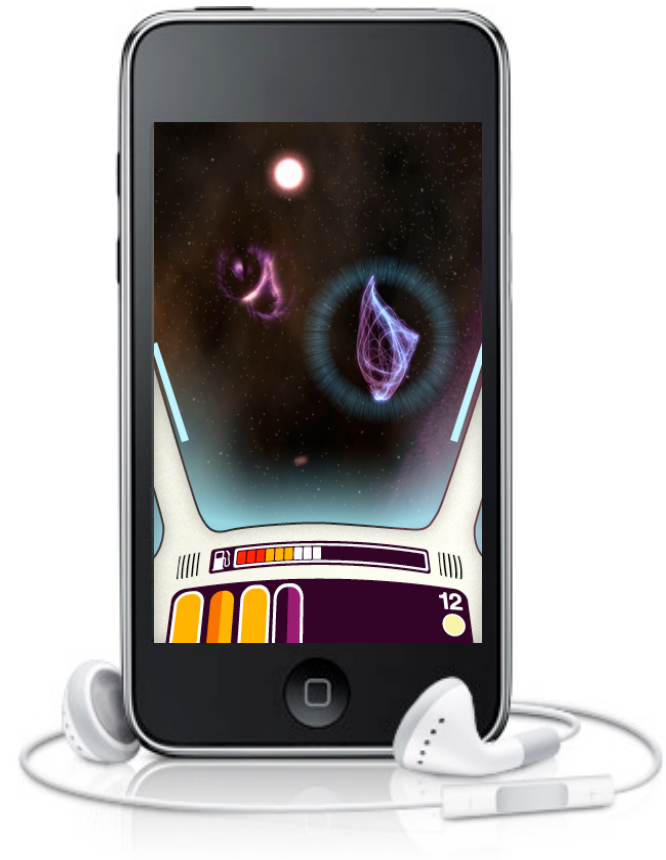
Game design

Rush Mode

Breath of fire

Relax Mode

Deep, slow breaths



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Feature 2

**Multi-touch
capability**
Enables haptic
input



Source: Apple.com

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Game design

Rush Mode
Selection of
objects



Feature 3

Accelerometer
Detects players'
motions



Source: Apple.com

Game design

Rush Mode

Fast-paced motion

Relax Mode

Slow-paced motion



Source: Apple.com



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Feature 4

Graphics and Audio
High quality



Source: Apple.com





Game design

Rush Mode

Warm colors

Fast tempo

Relax Mode

Cool colors

Slow tempo



What are we testing?

Can playing Lit evoke physiological reactions
similar to smoking?



OR



?



Research methods

Physiological Response

EEG
Skin Conductance
Heart Rate

Emotional Response

Self-reports
Integrated Reflection
Play test observation



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Experimental Groups

Smokers

Smokers who play Lit without breath component

Smokers who play Lit with breath component

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Thank you



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PLAY LIT 2 QUIT

