



University of applied sciences **Augsburg**



**the post card with video function**

**Prof. KP Ludwig John** **X** **Prof. Dr. Nik Klever**  
m o b i l e e **X** p e r i e n c e

University of applied sciences **Augsburg**

Research in „mobile experience & usability“  
is focused on **multi media communication with mobile devices.**

Fields of activities:

- **location based** services, applications or games
- **context related** services, applications or games
- optimizing the **Human Computer Interface**
- **Usability** Testing
- Creation of **Content** for mobile devices (Apps)

Special attention is given to the Interaction / **Interrelation**  
between **digital** content and its surrounding **physical**  
world.





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Our

**environment**

is

**filled with**

**sensations**

**for our senses**



...Atmosphere



...Diversity



...Surprise



**...Details**





**... Tranquility**



... Colors

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**mobile**  
**media devices**  
**are**  
**part**  
**of this**  
**reality**



# m o b i l e e **X** p e r i e n c e

## **Assumptions / Goals**

Holistic Experiences by  
**Intergrating different layers of perception**

**Combining sensory stimuluses**  
as well from the **digital** as from the **physical** environment

**Consider** and make use out of the  
**specific qualities** out **of the two worlds**



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# NFC Projects

- InSight

- lingualarc

- paperbits

# NFC - Projects

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## NFC-Chips

- **Re-Writeable**
- Capacity: a few kB
- relatively **cheap** to produce
- **small** physical dimension
- **robust** (because its possible to hide or cover)
- **perfectly suited to be placed inside objects**

To create:

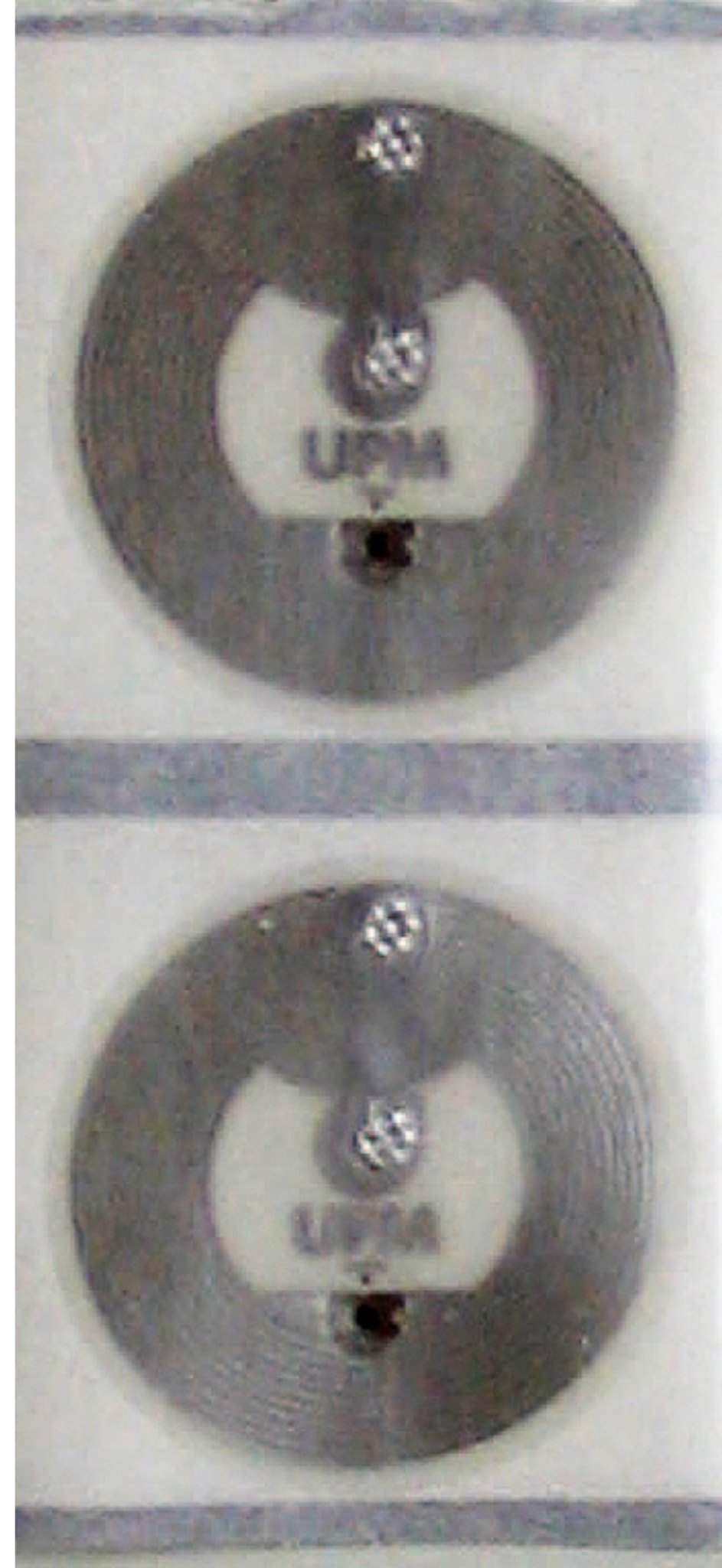
### **mobile experience**

**mixed reality applications,**  
where smart phone and physical Environment  
merge into one joined user experience

**Examples:**

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KP Ludwig John / Nik Klever



## INSIGHT

The idea:

Application to **explore public buildings.**

The smart phone serves as „magic“ tool.

It allows us to **look through walls,**  
to learn, what`s in the room behind the door in front of us.





**INSIGHT**

University of applied sciences Augsburg  
July 2011

## lingualark

Learn Chinese Language  
by combining

- classic **Learning Cards**  
haptic experience, no technical equipment necessary,  
easy to handle
- **smart phone**  
Control of Pronunciation  
Instruction How to hand-write the word in Chinese

# NFC - Projects

## lingua|ark



12 Learning-Cards

Chinese Signs of Zodiac  
Symbol + Writing

# NFC - Projects

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## lingualark



As soon as you position the smart phone onto the card, the **chinese symbol** from the card will be **displayed on the monitor** and you hear the correct **pronunciation** of it.

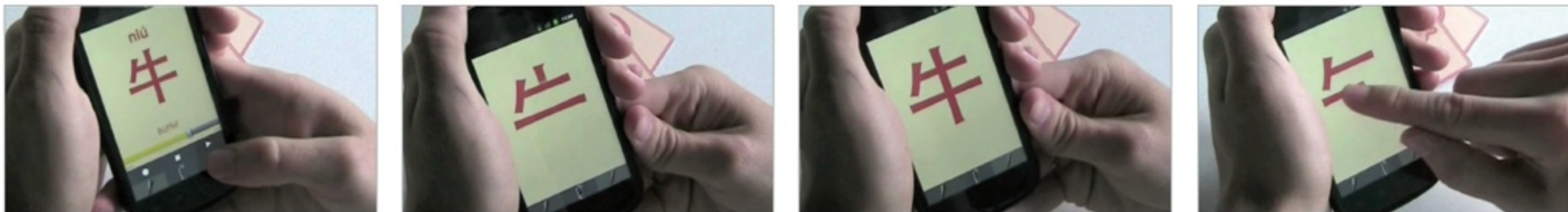
If you speak out loud the word by yourself it will be **recorded** and **replayed**, so that you can compare your pronunciation to the original one.

# NFC - Projects

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## lingualark

In addition you can watch an animation, which shows how to raw the sign correctly.



# NFC - Projects

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**the post card with video function**

# NFC - Projects

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Paperbits **combines** the charme of **traditional postcards** **with digital** media **technology**:

**Record** your personal video clip with your mobile phone,  
**encode** it onto your paperbits postcard,  
**handwrite** your individual greetings and **send** it.



**Get a (paperbits) post card** and write some greetings on it





**Go to Post Office**

paper bits

Die Postkarte mit deiner ganz persönlichen Videobotschaft  
www.paperbits.de

Wetter gut, Skis  
zu Piste ist  
und dem Postwert  
Besuche  
wird. Schenke  
10  
Heute  
10  
10



Projektgruppe Paperbits  
Prof. John

Augsburger Str. 2

86161 Augsburg  
GERMANY

Voraussetzung ist ein NFC-fähiges Handy. Siehe: [www.nfc-handly.eu](http://www.nfc-handly.eu)

Absender: Paperbits-App im Android-Store herunterladen,  
dein Video mit der Postkarte verlinken  
Empfänger: Postkarte scannen, Video anschauen  
Stamps in KOREA found!!!

Buy stamps

paper bits

Die Postkarte mit deiner ganz persönlichen Videobotschaft

www.paperbits.de

Weltweit, Skizzen  
zu viele ist  
und den Postwert  
nicht. Schon mit w.l., wo

Reschreiben der Postkarte  
Beschreibung der Postkarte  
Beschreibung der Postkarte

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Absender: Paperbits-App im Android-Store herunterladen, dein Video mit der Postkarte verlinken

Empfänger: Postkarte scannen, Video anschauen

PS.: NO STAMPS IN KOREA FOUND!!!



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Stick them onto the card



Post the card

# NFC - Projects

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The recipient will certainly be happy to get your post card, read your handwritten text and see the printed photograph on the other side.

On top of this,  
an **NFC**-enabled mobile **phone will play back**  
**your personal video message**, which you've encoded on the card.

Here is, **how it works**:



[www.paperbits.de](http://www.paperbits.de)



**2 weeks later: card was in the mail box**



**Read text and drawing**





**Place NFC-smart phone on the card**



**Watch the video**

2012 International Seminar, Design Institute of Inje University

# Convergence Courses in Academy Curriculum

**Mobile Experience with NFC**  
KP Ludwig John  
(Augsburg University of Applied Sciences)

**Mobile Apps for u-Healthcare**  
Eui Tay Jung  
(Design Institute, College of Design, Inje University)



RFID, NFC, Smart Home, Smart Grid, Smart City, Smart Mobility, Smart Retail, Smart Energy, Smart Health, Smart Education, Smart Transportation, Smart Manufacturing, Smart Agriculture, Smart Infrastructure, Smart Living, Smart Industry, Smart Services, Smart Governance, Smart Security, Smart Environment, Smart Mobility, Smart Retail, Smart Energy, Smart Health, Smart Education, Smart Transportation, Smart Manufacturing, Smart Agriculture, Smart Infrastructure, Smart Living, Smart Industry, Smart Services, Smart Governance, Smart Security, Smart Environment



**Few months later:** the card (and video) is still kept on the pin wall

# NFC - Projects

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Released as Android-App on 10th of July 2012  
Available at the **playStore**

Further developments:  
Team is in talks to potential partners to market the cards

**Next step:**  
Development of **NFC-Stamps**,  
which would allow to combine any piece of paper with this technology

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[www.paperbits.de](http://www.paperbits.de)

[www.hs-augsburg.de/~john/mobile-experience/](http://www.hs-augsburg.de/~john/mobile-experience/)