

# Community Engagement Using NFC

Slide 1 - Title Slide

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Slide 2 - What is NFC? Section Header

## Slide 3 - What is NFC? Definition

DEFINITION:

- Near Field Communication (NFC) is a short-range, wireless communication technology that establishes a temporary peer-to-peer network to complete a small data transfer.

## Slide 4 - What is NFC? a short-range, wireless communication technology

FOUR INCHES

- RFID range is measured in meters & feet while NFC is measured in inches
- While this limits usability based on proximity, it increases security while essentially eliminating privacy & intrusion concerns.

NO WIRES

- Users expect to use wireless tech, it has become ubiquitous.
- Nobody wants to plug into a cable for a data transfer.

COMMUNICATION (SEND/RECEIVE)

- Before programming, the device is the active agent (sends data) and the tag becomes the passive agent (receives data)
- After programming, this order is reversed, when the device (passive) receives data from the tag (active).
- It's not a dialog

## Slide 5 - What is NFC? a temporary peer-to-peer network

LOCAL COMMUNICATION

- The information is static. There is no device serving up new information to the tag.
- However the tag is programmed to function is how it will behave until it is reprogrammed.

TERMINATION

- Once the tags have been activated and completed the transaction, this connection is terminated.
- There is no memory involved, each time the tag is tapped again a new P2P connection is formed and the transaction will occur again.
  - The tag doesn't remember you.
  - The tag won't give you something different.
- *What if you swiped a hotel key and got a different response every time? You don't want that. You want the door to unlock EVERY TIME.*

## Slide 6 - What is NFC? a small data transfer

Capacity is measured in Bytes & Kilobytes:

- Bit - Nibble - Byte - Kilobyte - Megabyte - Gigabyte - Terabyte - Petabyte - Exabyte - Zettabyte - Yottabyte
  - Bit (1 or 0), Nibble (4 Bits), Byte (8 Bits), KB (1,024 Bytes), MB (1,024 KB)... etc
- TRANSFERS - Text || URL

## Slide 7 - About the Project. Section Header

### Slide 8 - Tech Fee Grant

- Allocation of University Funds for projects to enhance services to students through the use of technology.
- Price quote from the 2016 proposal: Budget: \$925
  - NFC Capable Tablet (\$300)
  - NFC Tags (\$625 - 2500 NTAG213 Stickers. 25mm circle. \$0.25/per)

### Slide 9 - Steps, General

Step 1: Selecting Materials

- You already do this, put together a display based on a theme that will naturally encourage reading, browsing, and exploration. Team up with a colleague you know has an interest or expertise in the area.

Step 2: Design a template

- Build something you can reuse over and over again. We settled on "Tap, Scan, Read" as the final name of the project and re use the Header, Footer, and Instructions on all posters to foster a sense of familiarity and professionalism with the "brand."

Step 3: Permalinking

- It is important to use a trustworthy link that will not fail users after they have gone through the trouble of using an innovative delivery method. It is also critical that this link be their final stop, so the permalink should direct the user to the resource immediately, since users want to use the resource, not fiddle with record metadata.
- In the case of ebooks, the permalink should open to the cover page of that book. In the case of streaming video, the permalink should launch the video app and begin playing the movie.

Step 4: Create URL/QR Code

- ACCESSIBLE || Short URLs allow the creators to present a memorable link to the more complex permalink, branding opportunities and usage stats.

Step 5: Program NFC Tag

Step 6: Put it all together

## Slide 10 - Steps NFC

1. Format
  - a. First, format the tag to ensure that you are working on a clean slate. Our tags are reusable, so we have the option to reformat and reprogram tags from old displays and repurpose them. Formatting does not take long and can be viewed as a best practice first step.
2. Write
  - a. We choose to program the short URL onto the NFC tag, but there are several options that may be useful. For instance, a subject librarian may choose to program a virtual contact card, or the tag may launch a specific app, or WiFi configuration can be programmed right into the smart poster.
3. Secure
  - a. Secure the tag to discourage tampering. NFC Tools allows you to either lock the tag or set a password. However, a locked tag cannot be unlocked, so we have decided to set passwords to have the option to repurpose tags later.

REMEMBER: All these functions are handled by the application. In our case, we used **NFC Tools**. It is available in the Android app store.

**Slide 11 - Examples. Section Header || Slide 12 - Frommer's**

**Slide 13 - Happy B-day Harry || Slide 14 - Audiobooks**

**Slide 15 - Examples. Subject Librarian Posters**

**Slide 16 - RESULTS. Section Header || Slide 17 - Results. 3-1**

**Slide 18 - Results. 216 || Slide 19 - Results. This Summer**

## Slide 20 - Lessons Learned

### TOP - ADVANTAGES

- Low tech graphical display
  - While NFC is technically advanced, the display is not.
  - No expensive screen. The tags cost about a quarter each.
  - Maintenance is minimal
- Physical browsing of digital resources
  - How do we show users our digital content?
- Fast delivery
  - Designed using a permalink that immediately gets users into the content without having to click-click-click...
- Beyond the Walls
  - This tech is not dependent on constant monitoring or any processes requiring physical proximity to the building. So we have been able to place posters in strategic locations like the History Department & Global Learning.

### TOP - CHALLENGES

- Need a device
  - While the display is “low tech”, users must still own a compatible device. No screen in the display means users must bring their own screen.
  - Tried to make the cards accessible using the short link / QR Code
- Learning to find resources
  - The content is delivered to them and that’s awesome, but can they find it later when the session expires?
  - What users think they need (need it quick) versus what they actually need (need to learn where to find it)

## Slide 21 - Contact Slide