A Mobile, GPS-enabled Listing Application

Unobtrusive, automated, and accurate assistance for address-based frame building
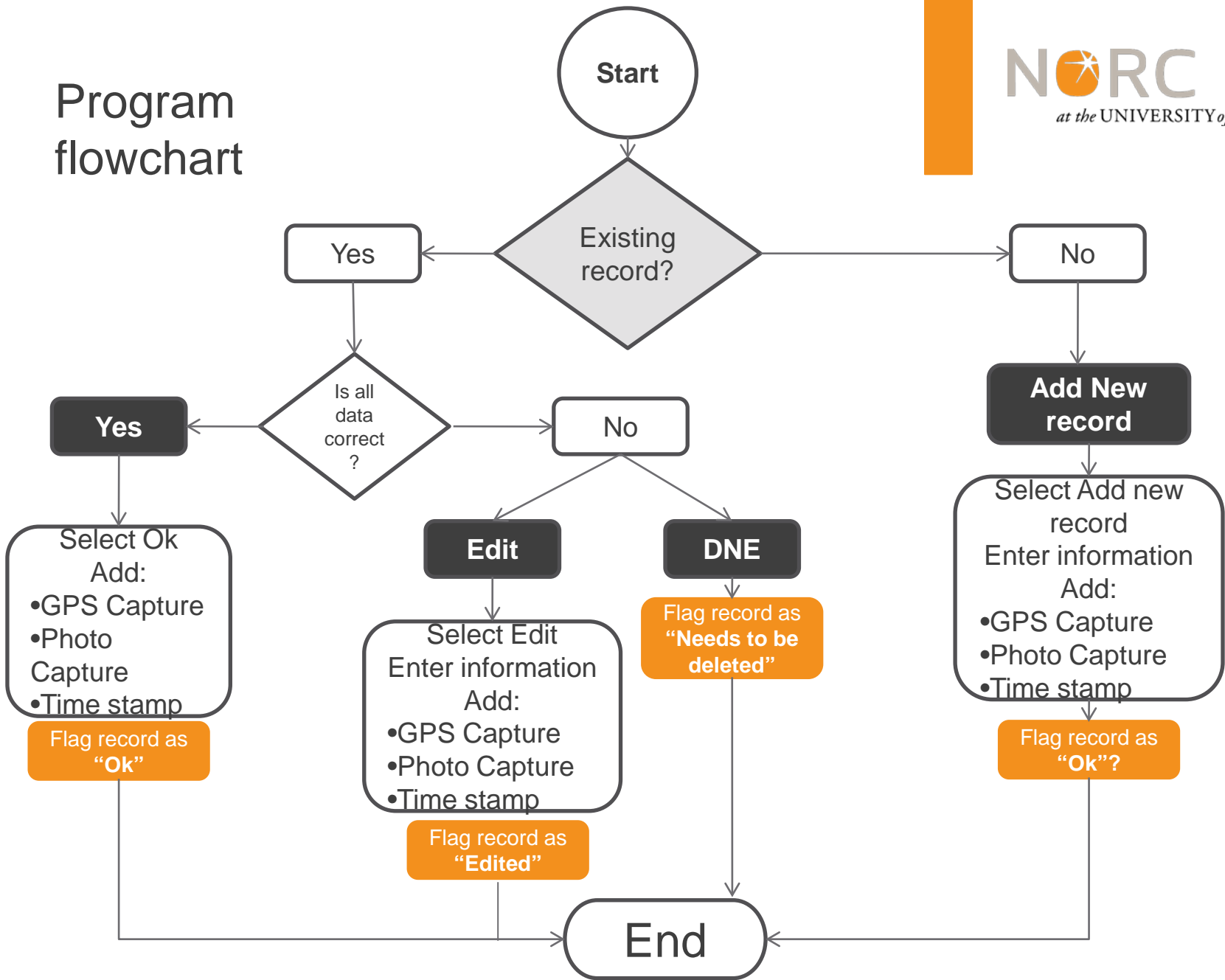
Joshua Seeger, VP of Technology
seeger-josh@norc.org

NORC
at the UNIVERSITY of CHICAGO

Objectives & Approach

- Explore the utility of mobile handheld devices for survey work

- Incorporate GPS-enabled location capture and photography in field work

- Find an expedient and cost-effective approach that works on multiple platforms

- Exploit existing technology

Program flowchart

Start

Existing record? → **Yes** / **No**

Yes branch:
Is all data correct?
- **Yes** → Select Ok
  Add:
  - GPS Capture
  - Photo Capture
  - Time stamp

  Flag record as **"Ok"**

- **No** →
  - **Edit** → Select Edit
    Enter information
    Add:
    - GPS Capture
    - Photo Capture
    - Time stamp

    Flag record as **"Edited"**

  - **DNE** → Flag record as **"Needs to be deleted"**

No branch:
Add New record → Select Add new record
Enter information
Add:
- GPS Capture
- Photo Capture
- Time stamp

Flag record as **"Ok"?**

End

Data structure details and variable definitions

Variable Name	Variable Description	Question instructions for Listers	Question type	Editable in Mobile Data entry	Field type	Field length (min/ max characters entered)	Required or can leave empty?	Special Characters Allowed
Lister name			Message Pre-loaded	Yes			Required	
Employee number			Message Pre-loaded	Yes			Required	
Site			Message Pre-loaded	No			Pre-loaded	
City			Message Pre-loaded	No			Pre-loaded	
Segment			Message Pre-loaded	No			Pre-loaded	
Tract			Message Pre-loaded	No			Pre-loaded	
Block			Message Pre-loaded	No			Pre-loaded	
Line #	Line # (unique index variable)		Open- ended numeric	Yes	Numeric			
Street number	# is the street address number		Open- ended text	Yes	Alphanumeric ?			Unnumbered structures? Special coding?
Pre	Pre stands for prefix, as in the "North" of "North State Street", only abbreviated "N"		Single response (drop down)	Yes				
Street Name	Street Name is only the name part of the street name ("State" of the example above)		Open- ended text	Yes	Alphanumeric ?			
Type	Type is one of {St., Rd., Ave., Ln., etc.}		Open- ended text	Yes	Alphanumeric ?			
Dir	Dir is also a {N, S, E, W} variable for places where they put the directional after the street name as in "State St. N"		Single response (drop down)	Yes				
Apartment #	Apt is apartment #		Open- ended numeric	Yes	Numeric			Complicated appartments? Special coding?
Description	Description is free text describing the dwelling and anything peculiar about accessing it		Open- ended text	Yes	Alphanumeric ?			
GPS Capture	GPS Capture		Location capture	No	NA	NA		NA
Photo Capture	Photo Capture	(i.e take a photo of the front door, etc	Photo capture	No	NA	NA		NA
	Time stamp		Not displayed, captured in data	NA	NA	NA	NA	NA

Other variables?

And the Result…

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Listing Project Demo

techneos.

Fetching the Data

Techneos Login

An Excel Extract

The Data