UV M-Commerce Interface Sustainabilty

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Project Overview

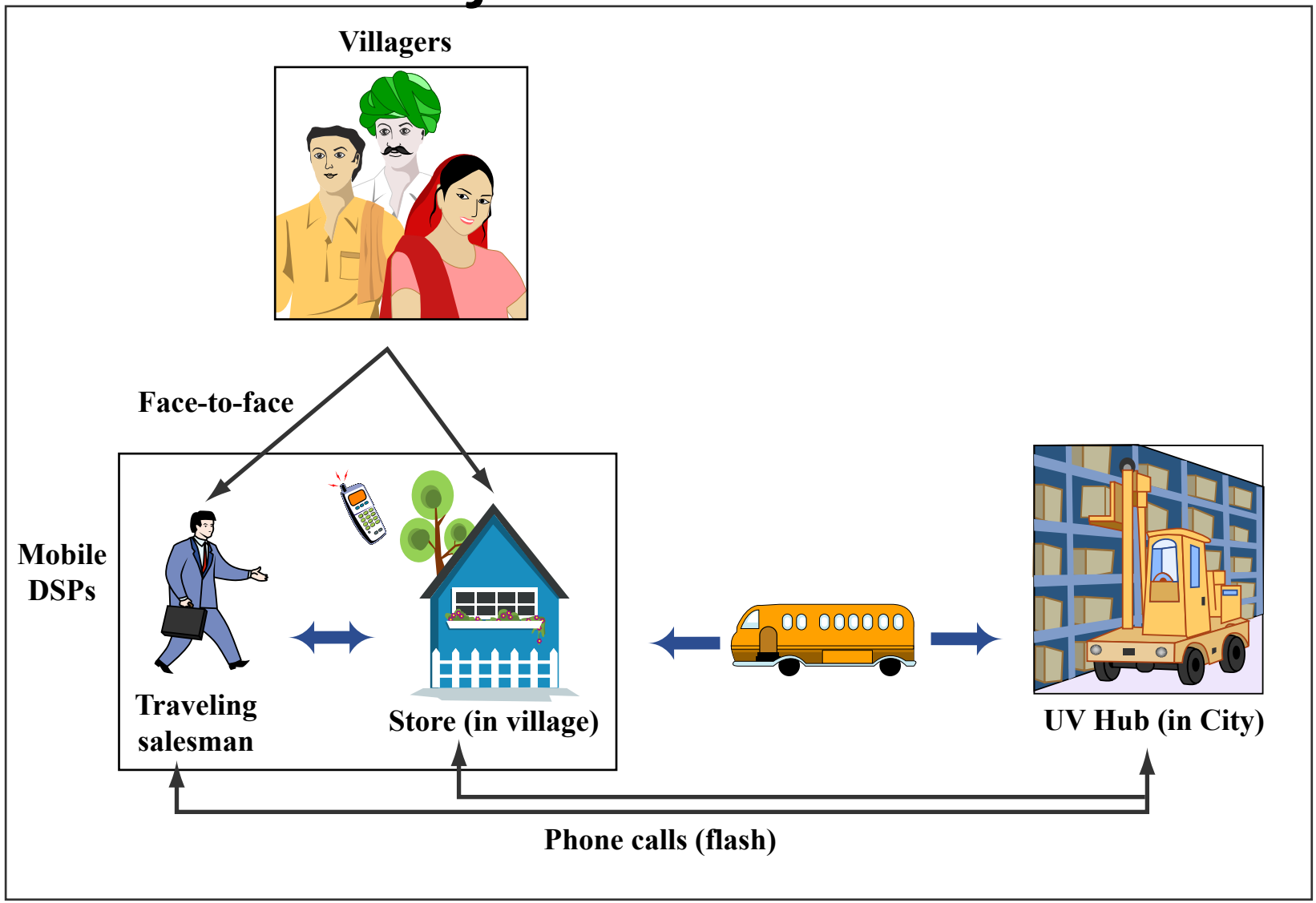

Figure by MIT OpenCourseWare.

Overview

- United Village Operations
- Mobile DSP perspective (phone purchase, use)

- Utilizing Open Source and industry standards
- Recommendations to engage developer or future NextLab teams
- Focus on clear documentation and training materials

- Identified key behavioral changes needed
- Defining process and documentation to ensure operational sustainability

- Focus on building and strengthening relationships with key stakeholders at all levels of the United Villages organization

Financial Sustainability Summary

- Mobile DSP Perspective
  - Key Question # 1: Will mDSPs purchase J2ME phones?
  - Key Question 2: Will they use the new system instead of flashing calls?
- UV Operations perspective
  - Cost/benefit of the M-Commerce interface?

Financial Mobile DSPs Economics
Key Question # 1: Will mDSPs purchase J2ME phones?

Upfront Costs

- J2ME-enabled phone: $75
- Training costs: $17 (5 hours for travel and training at $3.50 / hour)[1]

On-going Costs (Monthly)

- SMS: $0.04 ($0.02 per message x 2 orders per month)
- Monthly catalog updates: $14.00
  - 4 hour round trip (travel + time in head office)
  - Average hourly salary $3.50

Gross Profits (Monthly)

- Average Monthly Gross Profit = $45.96

Break Even

Monthly Gross Profit	x	Months	=	Upfront Costs
$45.96	x	M	=	$92.50
		M	=	$92.50/
		M	=	2.01
				months to break even

Financial Sustainability: Mobile DSPs Economics
Key Question 2: Will they use the new system instead of calling?

Primary reasons for calling

Preliminary

Call Reason	Calls / mDSP	Minutes / Call
Orders Placement	2	5
Order Status	1	3
Price Requests	2	3
Negotiations	2	8
Product Requests	1	3
Volume Discount	1	5

Solution address the problem

- The new system will address large sources of call volume
  - Price requests
  - Order confirmation
  - Volume discount
- However, adoption will be challenged by the persistence of
  - Negotiation inclination
  - Off-catalog product requests
- Policy decisions may force usage

Financial Sustainability: United Villages Operations Perspective

Upfront Costs	• Software development: Next lab team ($0) • Software licenses: Open source ($0) • Hardware requirements: Servers already in place
On-going Costs	• SMS: $0.015 per message • SMS volume: 20 (2 orders per DSP and 10 mDSPs) • Assuming: NextLab team can continue development
Benefits	• Initial estimates suggest that UV will be able to reduce call volume by 44% • Reduced call volume would enable UV to hire fewer call center operators as they scale up their operations

Technological Sustainability

We have chosen open source software platforms and industry standards

FrontlineSMS

Java
J2ME
CDC

Open Source J2ME relational database

We have developed a plan to ensure technological support beyond January

- Recommending that UV hire a part-time software engineer or continue working with NextLab student teams
- Defining role and responsibilities and ideal skill set
- Documenting existing system and providing training materials to ensure smooth hand-off

Until mobile broadband gains pervasive adoption in rural India, our solution will be technologically sustainable

Operational Sustainability

Change in behavior required…	…by whom?	How are we ensuring operational sustainability?
Regular updates to the catalog	• UV Operations	• Define process for updating catalog (inventory and prices) • Train UV Operations staff on process
Use of the m-commerce interface	• mDSPs	• Create training curriculum for each level of the organization • Train mDSPs during January visit • Suggest policy changes to discourage negotiation and voice-based interactions
Continue updating and improving software	• UV developers • Future NextLab students	• Documentation will be posted on Google Group • Code is stored on Sourceforge

Human Sustainability

Level of Organization	Who?	Sustainability Commitments required	Actions taken to build goodwill	Next Steps
Executive	• Amir Hasson, CEO • Femi Omojola, CTO	• Commitment to test solution • Commitment to fund further development	• Regular e-mail correspondence	• Regular in-person progress meetings
Operations	• Fulfillment managers and operators	• Commitment to use the new system during pilot • Commitment to learn how to use the new system • Commitment to not call back buyers • Commitment to maintain system (catalog, install new versions on the phone)	• None	• Include in future design discussions via Skype conference calls
Village	• Mobile DSPs (2 per village, 5 villages)	• Commitment to test the new system when it is rolled out • Commitment to dedicate time in January for feedback sessions and interviews • Longer term commitment to use the system provided or provide actionable feedback to United Villages	• Surveyed mobile DSPs on technology usage • Surveyed mobile DSPs on usage/shortcomings of existing system	• Identify the exact set of mobile DSPs who will be included in the pilot program • Further survey these folks to "pre-wire" testing

Questions

Appendix

UV Operation Economics

- Key Assumptions:
  - mDSPs use system, which drives down call volume
  - Next Lab team continues development

Fixed Costs				
	Software Development	$0.00		
	Software Licenses	$0.00		
	Hardware Requirements	$0.00		
Monthly Variable Costs				
	Data Transmissions	$0.31		
	Number of mDSPs	10		
	Orders / mDSP	2		
	Cost / message	$0.02		
	Catalog Updates	$17.50		
	Operations workers time	0.5		
	Hourly Salary of Operations workers	$3.50		
	Number of mDSPs	10		
	Costs Avoided	Volume	Minutes / Call	
	Total Call Volume	90		
	Calls Avoided	50		
	mDSPs	10		
	Orders per mDSP	2	5	
	Order Status	1	3	
	Price Requests	2	3	
	Negotiations	2	8	
	Product Requests	1	3	
	Volume Discount	1	5	
	Total Minutes Avoided	190		
	Total Minutes	430		
	Percent of Minutes Avoided	44%		
	Air time charges/minute	$0.04		
	Total Airtime Chargest avoided	$8.44		
	Hourly salary per person	$3.50		
	Total Hourly wages avoided	$11.08		
	Total Costs Avoided	$19.53		

MAS.965 / 6.976 / ES.S06 NextLab I: Designing Mobile Technologies for the Next Billion Users
Fall 2008