



Moving the Masses: A Look at the Digital Television Conversion of 2009

Anita Wallgren: NTIA Program Director,
TV Converter Box Coupon Program

Stefanie Langsam: SGL Consulting LLC
an affiliate of The Legacy Network

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Moving the Masses: A Look at the Digital Television Conversion From Start to Finish



DTV Background

The NTIA Coupon Program

The Planning

The Challenges

The Unexpected

The Fine Tuning

The Results



DTV and Coupon Program Background





What is the DTV Transition and How Did it Happen?



- The Digital Television (DTV) Transition switched broadcast television signals from analog to digital delivery
- Over twenty years in the planning, as of June 13, 2009 all full-power U.S. television stations broadcast over-the-air signals in digital only
- The Transition was authorized by Congress, including funding for two DTV-related initiatives:
 - NTIA DTV Converter Box Coupon Program
 - FCC DTV Call Center Support services





DTV Transition Customer Support



NTIA	FCC
<p>Experience with grant programs</p> <p>Focus on retailers, manufacturers, and end users (aka “customers”)</p>	<p>Regulates broadcast licenses</p> <p>Focus on TV stations undergoing transition to digital TV and technical challenges</p>
<p>Congress established Coupon Program in Deficit Reduction Act of 2005 to subsidize the cost of converter boxes; program planning began in 2006; public able to request coupons starting January 1, 2008</p>	<p>In-house call center to take calls from public, industry, media, and other groups doing business with the FCC; able to leverage existing operation and expand to provide DTV support</p> <p>Received funding and began planning for outsourced consumer support in 4Q 2008</p>
<p>All about coupons – very transaction-focused</p>	<p>All about getting the TV to work – technical troubleshooting and “hand holding”</p>





NTIA Converter Box Coupon Program Basics



- All U.S. households were eligible to receive coupons
- Maximum of two, \$40 coupons could be requested and redeemed per household
- Coupons could only be used for eligible converter boxes
- Coupons expired 90 days after issue
- Coupons to be mailed using U.S. Postal Service
- Coupons could only be used at Program-Certified retail stores



NTIA Coupon Program Management Responsibilities



- Establish rules governing all aspects of the program
- Test and certify converter boxes
- Establish Consumer Education goals and strategies
- Coordinate Public-Private partnerships
- Manage federal funds to minimize waste, fraud, and abuse
- Manage contractor to distribute coupons, reimburse retailers, and deliver customer support – on time and within budget



NTIA Coupon Program Development



- Rules drafted and finalized at the same time as the RFP
- Statutory requirement to take first consumer request on January 1, 2008 at 12:01 a.m.
- Performance Based Contract required contractor to provide timely, reliable, scalable, efficient, available, secure, measurable and auditable solution
- Unprecedented program for NTIA and the bidding contractors





NTIA Coupon Program RFP Requirements



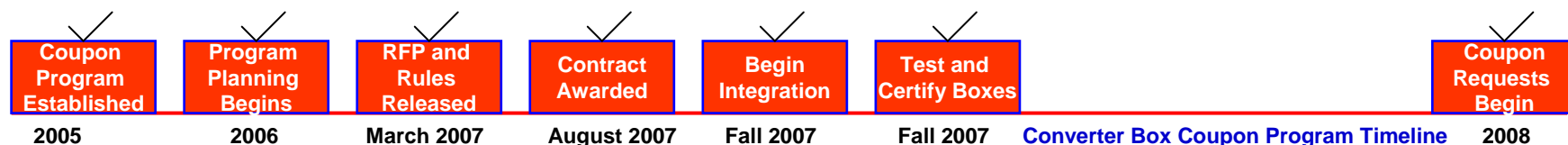
- Service in three areas:
 - ✓ consumer education
 - ✓ coupon request and distribution
 - ✓ retailer payment and audit
- Functionality to accept citizen requests via four channels:
 - ✓ phone
 - ✓ web
 - ✓ fax
 - ✓ mail
- Utilize existing commercial infrastructure
- 24x7 system processing



NTIA Coupon Program Contract



- Contract awarded to Team IBM on August 14, 2007
 - Ketchum – Consumer education
 - Epiq Systems – Coupon request and distribution
 - CLC Services – Retailer management and payment
 - West Interactive and West Direct – IVR and call center
- Full end-to-end system, including:
 - ✓ toll-free consumer support center
 - ✓ plastic card production, processing and distribution
 - ✓ retailer certification and management
 - ✓ coupon redemption, retailer payment processing and financial reconciliation
 - ✓ comprehensive waste, fraud and abuse processes
 - ✓ financial management





NTIA Coupon Program Launch



January 2008						
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

DAY ONE: JANUARY 1, 2008



Day One Realities



- Phones rang and website traffic was high:
 - January 1: 157,588 calls
 - January 2: 205,600 calls
- Coupons requested:
 - January 2: more than 900,000 coupons
 - First week: more than 2.4 million coupons
 - First month: 4.2 million coupons
- Many callers also looking for information



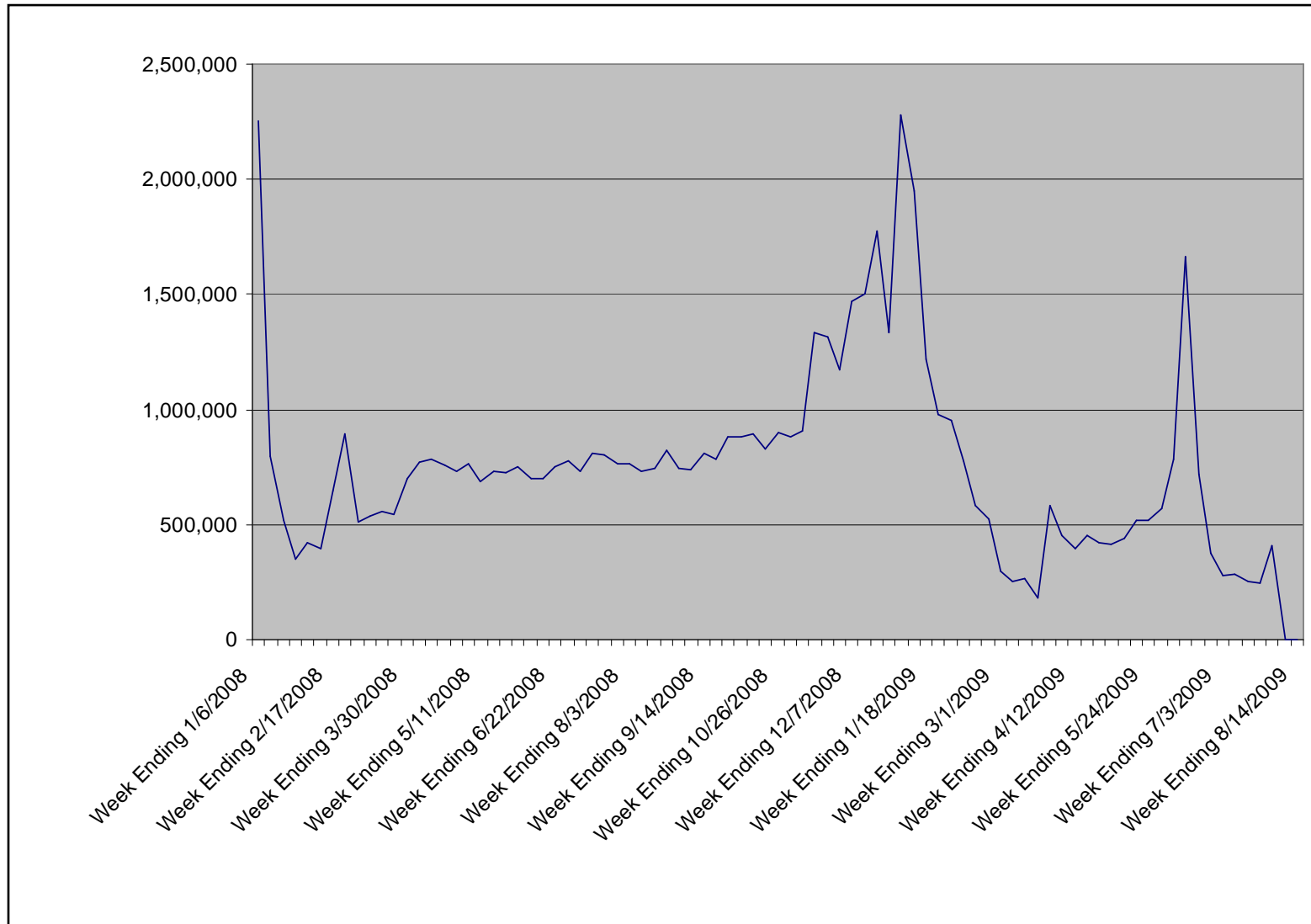
Customer Service Success!



- Total Calls to Coupon Program Toll-Free Number: **51,726,535**
 - Total Spanish calls: 14 million
 - Total Live Agent calls Handled: 7.5 million
- Total Website Hits: **211,681,869**
 - Total Sessions (unique visits): 9 million
- Total Approved Applications by Channel: **34,800,780**
 - Web: 20.5 million Phone: 13 million
 - Fax: 137,000 Mail: 1.1 million
- Total Consumer Support Emails: more than **186,000**
- Total pieces of Correspondence Received: **75,000**



Coupons Requested by Week





Coupon Program Customer Service Operation





Customer Service Operation: Day One Approach



- 24x7 call center operation including IVR and agent support

IVR	Agent
<ul style="list-style-type: none">• English IVR with speech recognition functionality (added Spanish IVR in first month)<ul style="list-style-type: none">✓ Order coupons✓ Check coupon status✓ Frequently asked questions (FAQs)✓ Transfer to an agent• FAQs for Spanish and 5 additional languages• Targus lookups based on phone number to capture address• Real-time interface with coupon application approval/denial and coupon status system	<ul style="list-style-type: none">• Spanish and English plus support for additional languages (thru Language Line or native speakers)• Two providers – mix of on site and at-home agents• Agent desktop with scripts; real-time interface with coupon application approval/denial and coupon status system; zip code lookups; data transfer from IVR<ul style="list-style-type: none">✓ Order coupons✓ Check coupon status✓ Frequently asked question• 2 “tiers” – specialists for calls requiring “off script” knowledge, access to database for “fuzzy” searches



1/1/2008

Converter Box Coupon Program Timeline



Customer Service Operation: Challenges



- Design assumptions proved wrong – all of them!
- Higher than expected overall call volume
- Low IVR completion rate resulting in higher percentage of IVR transfers to agents
- Average call length longer than expected
- Performance-based, fixed price contract – costs significantly greater than originally expected to meet SLAs

New Goal: Design and implement the most efficient transaction for coupon orders to enable high volume throughput – focus on coupon orders as priority!



Customer Service Operation: What Now?



- Achieve stability in current operation:
 - ✓ Minor changes to IVR and queue thresholds
 - ✓ Increase agent staffing
- Intense review of end-to-end phone channel operation in collaboration with vendors included:
 - ✓ All available IVR and agent call data
 - ✓ IVR flows, scripts, caller experience, transfer points - both customer-initiated and “fault”-driven
 - ✓ Agent calls, including “escalations” and use of tools





Customer Service Operation: What We Found



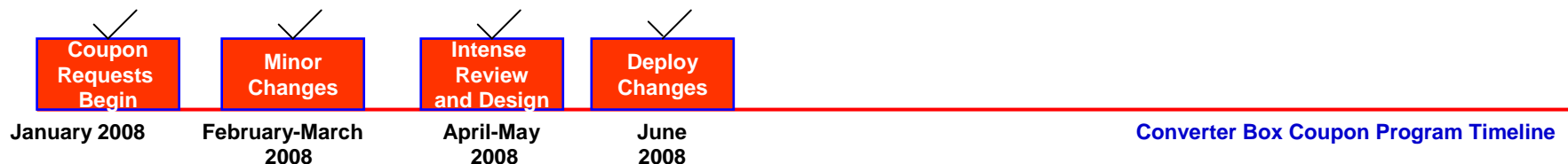
- Caller demographics heavily skewed towards elderly population
- Targus hit rate lower than expected
- High failure rate in Spanish IVR
- Speech recognition acceptance lower than normal standard
- 50-60% of callers not calling to order a coupon
- Unexpected call volume from cable/satellite households
- Calls transferred to specialists for status checks
- Spanish and other language calls increased use of language services
- Highest volume was 8:00 am – midnight - 24x7 agent support not adding real value



Customer Service Operation: What We Changed



- Revamped IVR:
 - Focus on coupon orders and accurate address
 - Change to touch tone vs. speech
 - Improvements to automated playback of address
 - Built in defaults similar to paper applications
 - Streamlined transfers at “failure” points
 - Offered option to use speech *at caller’s choice*
- Removed Spanish IVR and routed calls straight to agent queue
- Updated agent training and scripts – coupons only, focus on managing call
- Implemented “special handling” for cell phone callers and repeat callers





Customer Service Operation: What We Changed



- Changed agent hours to 8:00 am – midnight; modified staffing schedules and Spanish/English mix
- Adjusted percentage of callers allowed into queue
- Removed escalations to “specialists” – all agents, all calls
- Updated queue messaging
- Identified other changes to drive consumer behavior:
 - Website enhancements to push callers to web
 - Added email address for appeals and questions
 - Consumer messaging focused on website first; toll-free number *only* for coupon orders



Customer Service Operation: Results!



- IVR coupon application success rate improved 12%
- Increased Targus “address correct” rate by more than 20%
- Agent coupon order throughput increased by 10%
- Average call length dropped from 3(+) minutes to 2(-) minutes
- Decreased repeat calls as a percentage of total calls by more than 25%
- Less than 2% of callers heard the “after hours” message
- Improved caller experience with easier navigation thru IVR and option to use speech
- Reduced IVR costs allowed for shifting of resources to agent calls



Just when everything seemed to be going smoothly...



Apply, Buy, Try Message

Fall 2008: “Apply, Buy and Try” message spurs demand

- 5 million coupons requested in November
- 7.2 million coupons requested in December
- Approval to mail coupons to PO Boxes and nursing homes

Busiest Month For Program

January 2009:

- Funding limit reached
 - coupon distribution stopped and waiting list began
- Change of Administration – DTV transition and coupon program identified as one of “top 13” key initiatives

Transition Date Changed

February 2009:

- DTV Delay Act changes transition date to June 2009; coupon requests extended to July 31
- First FCC outsourced call center launches – includes cross-program coordination



Just when everything seemed to be going smoothly....



Focused Outreach

March 2009:

- Targeted outreach to remaining unready households
- Cleared waitlist of 4.2 million coupons
- Switch to first-class mail allows faster delivery of coupons
- Replacement coupons allowed

FCC Launches

May 2009:

- Second FCC outsourced call center launches
- Enhanced appeals process implemented

June 12, 2009: Analog shut down occurs

July 31, 2009: Last Day to Request Coupons

August 31, 2009: Toll-free number shuts down



NTIA and FCC Customer Service Operations: Compare and Contrast





NTIA and FCC Customer Service Operations: Similarities



- Customer population served
- Unknown call volumes and call patterns
- Outsourced call center operations (one prime, multiple subs)
- Ability to ramp agent staffing up/down on short notice
- Highly visible with Congressional and White House interest
- Extensive partnerships with community-based, media, trade associations and other organizations
- Flexibility, adaptability and ability to make rapid technical and operational changes are KEY



NTIA and FCC Customer Service Operations: Differences



	NTIA	FCC
Lead Time	<ul style="list-style-type: none"> Multi-year effort from inception to launch 	<ul style="list-style-type: none"> Procurements completed in one month; launched in 10 days
Hours of Operation	<ul style="list-style-type: none"> 8:00 am – midnight, 7 days per week 	<ul style="list-style-type: none"> 8:00 am – midnight, 7 days per week 24x7 on days leading up to and immediately following DTV transition DTV “Command Center”
Procurement/ Contract	<ul style="list-style-type: none"> Performance-based; fixed price NTIA set requirements; contractor designed and delivered end-to-end solution 	<ul style="list-style-type: none"> Performance-based with flexible seat-based pricing in “batches” of 100 seats Provided training materials and up-front IVR, determined routing, developed scripts and flows
Self-Service Offerings	<ul style="list-style-type: none"> Robust, transactional IVR Web self-service for coupon orders, status and FAQs 	<ul style="list-style-type: none"> Very basic information and routing via IVR Web self-service with broad information, “how to” guides, links to resources
Average Call Length	<ul style="list-style-type: none"> Less than 3 minutes 	<ul style="list-style-type: none"> 10 minutes



NTIA and FCC Customer Service Operations: Differences



	NTIA	FCC
Agents and Staffing	<ul style="list-style-type: none"> • Brick and mortar sites (3) and at-home agents • 4 hours training before first call • All agents handle all calls – no tiered structure 	<ul style="list-style-type: none"> • Brick and mortar sites only (12) • 40-80 hours training before first call • Provided hands-on knowledge via “In-house” agents • Required vendors to scale to up to 4,000 agents • Dictated staffing levels by interval by week/day • Tier 1 and Tier 2 agents
Agent Tools	<ul style="list-style-type: none"> • Scripted agent desktop limited to coupon orders only 	<ul style="list-style-type: none"> • Used public website, including links • “DTV Tracker” to log calls – included “fact sheets” for certain topics
Agent Updates	<ul style="list-style-type: none"> • Generally only needed for major program changes – covered via training 	<ul style="list-style-type: none"> • Daily stand ups • “Real time” information passed to sites via on-call POCs • “Bulletins” produced and distributed to all agents



NTIA and FCC: Joint Efforts



- Transfer calls from one IVR to the other and from IVR to agent
- Review and provide input to training materials specific to coupon program
- Share and review scripts and flows and provide comments and updates
- FCC support for coupon status inquiries



Public Outreach: Consumer Education and Partnerships





NTIA's DTV Outreach Strategy



- Cultivate and leverage partnerships with industry, government and non-profit organizations to raise awareness and help affected groups
- NTIA worked with the DTV Transition Coalition, including NAB, NCTA, CEA, and key consumer groups – about \$1 billion pledged toward educational efforts
- NTIA worked with over 300 groups and organizations including 14 federal agencies
- Significant impact of “trusted partners”



Coupon Program Final Stats



- More than 112 million television households were prepared out of 114.5 million households
- Households Approved for Coupons: 34.8 million
- Coupons Requested: 64.1 million
- Coupons Redeemed: 34.9 million
- Redemption rate: 54.4%
- Nationwide Participating Retailers and Locations:
 - More than 2,300 retailers with 34,000 locations
- Participating Phone and Online Retailers:
 - 10 phone and 25 “virtual” retailers



Coupon Program Success



- Voluntary participation of retailers and manufacturers
- Effective consumer education campaign
- IBM Team
- Experienced Program Office

78% of consumers who used the Coupon Program rated it as “Excellent” or “Good”, according to CEA survey!



Anita Wallgren
NTIA Program Director,
TV Converter Box Coupon Program
(202) 482-6266
AWallgren@ntia.doc.gov

Stefanie Langsam
SGL Consulting LLC
an affiliate of The Legacy Network
(301) 762-6840
stefanie.langsam@sglconsulting.com

