New Applications in Speech Technologies for Health Care

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If you want to succeed in business, avoid “business as usual.”

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The Company and Its Industry
Who is Transcend Services?

- Medical Transcription Service Organization (MTSO) based in Atlanta, GA
- Public Company listed on NASDAQ: TRCR
- Established in 1987 as a full Health Information Management BPO
- Focuses exclusively on Medical Transcription for last 8 years
- Over 800 virtual employees
- Nationwide customer base consisting of health systems, hospitals, clinics and physician practices
What is Medical Transcription?

Medical transcription is the act of translating a recorded patient encounter into a textual transcript.
And What is our Mission?

Transcend Services commits to providing accurate medical documentation of the patient / provider encounter, on time, every time.

Period!
The State of the Industry

- Aging population, high demand for health care
- Demand for medical documentation increasing due to stringent payer documentation requirements
- Medical transcription traditionally a “cottage” industry with trend in recent years toward home-based and virtual workers
- Qualified medical transcriptionists have been hard to find in the U.S.
- Domestically, market size approaches between $10 and $15 Billion with only $6 Billion outsourced
- Market is highly fragmented with a handful of large companies and hundreds of “mom & pops”
- Offshore production facilities gaining foothold in industry
- Technology advancements slow to take root
- Industry standards being developed through ASTM, AAMT and MTIA
The Market Demands…

Accuracy

Expertise

Fast Turn Around

Low Cost
Avoiding Business as Usual

- Tackling rising costs of production
- Improving service quality & turn around time (TAT)
- Coping with workforce shortages
- Dealing with demanding customers
- Feeling the “squeeze” of downward pricing pressure
Needed a Solution that Would…

• Lower production costs
• Increase productivity of workforce
• Improve accuracy of medical language
• Improve turnaround time
• Improve overall quality and appearance of reports
Our Solution: Beyond TXT™
Build it and They will Come

- Speech Recognition Deemed Best Solution to Address Cost and Production Problems
- Speech Recognition Partner Selection
- Transcend’s Build or Buy Dilemma
- Workflow a “Work in Progress”
- Transforming a Service Business’ Services
Selecting the Right Speech Recognition Partner

M*Modal was the natural choice for Transcend:

- “Speech Understanding” Technology
- Built for integration
- Willingness to Partner
- Synergistic vision regarding Transcription Workflow
Integrating Speech Recognition

- Integration Challenges
- The Time Frame
- The Solution
Integration Challenges

- 3rd party dictation capture and transcription user workflow platform
- No way to insert necessary speech recognition workflow into this platform
- No way for existing platform to deliver speech recognized drafts to transcriptionists
- Word-Based Transcription Platform
- No $$ available for parallel system build – have to add it on to live production system without interrupting production
- Limited Resources – 3 Developers able to devote partial time to project
- Existing Platform has to continue to function and be highly available during transition
- Short time frame expected for results
**Time Frame**

- Estimated 12-18 month integration
- Wanted it by April 15\textsuperscript{th} (it was April 1\textsuperscript{st})!
- Decided on a phased approach to delivery
  - Phase I
    - Delivered first live production Editing work on system inside of 8 months (Phase I)
  - Phase II
    - Full Editing solution with advanced user workflow delivered within 14 months
  - Phase III
    - Complete Solution delivered in 22 months
The Solution

• **Build non-Word based transcription desktop**
  – Integrate and customize M*Modal editing components and adapt existing desktop components to work with editor (must be backward compatible)

• **Build speech recognition workflow components**
  – Submit audio, Retrieve Draft, Render Documents

• **Build back end workflow system**
  – Allow customizable routing of jobs to the speech recognition system based upon job type
  – Allow transition from current workflow system to new workflow system

• **Build user workflow and Resource delivery system**
  – Allow customized user workflow
    • Proper matching of given job type to transcriptionist in the right order at the right time
  – Allow for existing Word-based platform usage (non-editing jobs)
  – Allow typing and editing on new transcription desktop system

• Relax!
Dictation Capture / Existing User Workflow

New Backend Job Workflow Subsystem

Speech Recognition Submission Subsystem

Draft Retrieval Subsystem

"BeyondTXT" User Workflow and Resource Delivery System Subsystem

Transcriptionist Type Job using Word Based Platform

Transcriptionist Edit / Type Job Using New "BeyondTXT" Platform

Existing User Workflow Produced Documents

Existing Document Workflow

Ineligible Jobs

Draft

Non-Edited Jobs

Edited

Rendering and Speech Recognition Adaptation Subsystems

Phase I

Phase II

Phase III
The Effects on our Business
Baby Steps...Walk Before You Run

- Workforce Changes
- Production Changes
- Cost Savings
- Forecasts
- Expectations
Workforce Changes

• New Skill Set Needed in Workforce
• Editors Instead of Typists
• Training and Un-training
• Hand/Eye Coordination
• Pay Changes: Editing vs. Typing
• Retention and Recruitment Challenges
Production Changes

• Voice Capture Quality Suddenly More Important with Speech Recognition
• New Processes Surrounding Speech to Text Translation
• Workflow and Editor Enhancements for Automated Report Production
• Staffing Challenges for Editing vs. Typing Work
Cost Savings

• Effort to drive down the cost of production through pay changes

• Corresponding increase in productivity lagging behind pay changes

• Legacy enrollment accelerated to realize savings

• Savings realized after only 6 months of accelerated enrollment
Forecasts & Future Expectations

- 35% of the volume processed through our Data Center is on Speech Recognition
- Goal is 50% by the end of 2006
- Goal is 80% by the end of 2007
- Savings forecasts are dramatic in years 2 and 3
- Speech Recognition has permanently changed the complexion of our business
Do not go where the path may lead; go instead where there is no path and leave a trail.
Empowering Your customers and employees with speech technologies

SpeechTEKI 2006
The Voice Solutions Showcase

Thank You