

Personality Trait Attributions to Voice Mail User Interfaces

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ABSTRACT

The present study assesses user perceptions of current voice mail systems and identifies desirable traits that should be incorporated in future agent-based products. Both novices and experts ascribed similar personality traits to voice mail user interfaces: practical, intelligent, courteous, efficient, straight-forward, sophisticated, methodical, progressive and alert. Surprisingly, significantly more experts desired a more imaginative personality than novices. Moreover, 20% of the experts did not associate imaginative with voice mail systems tested. The results suggest that future voice mail user interface for experts should project an imaginative quality.

KEYWORDS:

Phone-based Interfaces, Voice Mail, Personality, Agents.

INTRODUCTION

An essential part of an effective and desirable interface is the ability to communicate with the user in a constructive dialogue. Recent research found that users preferred interfaces with personalities similar to their own (i.e. dominant users prefer dominant interfaces) [6]. Users rated the application as more competent when the personality of the user and the interface are consonant. The user interface must project a system image that the user can understand conceptually. A poor match between the user interface design and the user's conceptual model of telephony will limit the understanding of, use of and satisfaction with telephony applications, particularly Plain Old Telephone Service (POTS) [2].

In phone-based user interfaces, there is an imbalance in the user interactions with many Interactive Voice Response (IVR) and voice mail systems. IVRs present lengthy voice prompts or audio menus that restrict user responses to a series of touch-tone key presses. These interfaces lack the

natural conversational flow found when human secretaries take messages or route calls. Recently, voice processing platforms have incorporated speech recognition capabilities and the metaphor of a secretary as a means to engage the user in a more conversational style interface. Moreover, the system's image of a secretary would be reinforced by projecting a distinctive personality. Some contend that an anthropomorphic agent should have the personality of "someone you'd like to work with" rather than the "unctuous clingy feel" found in current IVRs [4]. Rather than rely on anecdotal evidence or intuitive judgments that are poorly articulated, studies should be conducted to systematically determine personality attributes of current voice mail systems.

Before designing new agent-based user interfaces, it is important to assess the user perceptions of current systems and identify desirable traits that should be incorporated in future products. The present study addresses two questions:

Which personality traits do experts and novices attribute to current voice mail user interfaces?

Which personality traits do experts and novices desire in voice mail systems?

METHODS

Two groups, 25 novices and 25 experts, performed nine tasks:

- | | |
|------------------------------|-------------------------|
| 1) Creating a list | 6) Forwarding messages |
| 2) Editing a list | 7) Replying to messages |
| 3) Recording greetings | 8) Scheduling delivery |
| 4) Listening to new messages | 9) Sending messages |
| 5) Reviewing saved messages. | |

After completing these tasks, respondents described the "personality" of the voice mail system by rating it with 84 different traits on a scale from 1 to 7 [5]. For example, if respondents thought the system was very intelligent, they assigned a seven. If they did not judge it as very intelligent, they assigned a one. If the trait was not applicable, no rating was associated with the trait. Next, participants selected 10 of the traits that they felt were desirable

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Table 1. Most frequently selected personality traits judged as desirable in voice mail systems by experts and novices

Trait	Traits Associated with Voice Mail						Desired Voice Mail Traits			
	Experts (N=25)		Novices (N=24)		Overall (49)		Experts (N=25)		Novices (N=23)	
	Mean	SD.	Mean	SD.	Mean	SD.	Percent	Rank	Percent	Rank
practical	6.00	1.19	5.61	1.67	5.81	1.44	88	1	68	1
intelligent	5.58	1.38	5.43	1.50	5.51	1.42	84	2	68	2
courteous	5.52	1.59	5.10	1.85	5.33	1.69	76	3	68	3
efficient	5.92	1.58	5.67	1.57	5.80	1.57	76	4	60	4
straight-forward	5.50	1.53	5.09	1.62	5.30	1.57	68	5	52	5
sophisticated	5.08	1.32	5.04	1.65	5.06	1.47	64	6	36	7
methodical	5.72	1.62	5.52	1.56	5.62	1.58	64	7	44	6
progressive	5.04	2.08	5.47	1.94	5.22	2.01	60	8	28	9
imaginative	3.67	2.09	3.94	2.31	3.81	2.18	40	9	16	15
alert	5.20	1.88	5.68	1.82	5.43	1.85	36	10	24	10
scientific-minded	4.29	1.99	4.65	2.08	4.49	2.02	28	12	32	8
Overall Top 10	5.23	1.66	5.20	1.78	5.22	1.71				

Mean: Mean rating each personality trait associated with current voice mail system evaluated on a 7 point scale

Percent: Percentage of respondents who selected the personality trait as a desirable for voice mail systems

Rank: Desirability of traits according to percentage of respondents

attributes for a voice mail system, including those traits that were deemed not applicable to the system tested. One novice did not rate the voice mail system. Another novice rated the voice mail system but did not select any of the traits as desirable.

RESULTS AND DISCUSSION

Respondents selected 45 different traits as desirable for voice mail systems. Both experts and novices shared 9 of the 10 top desirable traits for a voice mail system. The top five traits (practical, intelligent, courteous, efficient, straight-forward) were desirable among more than half of the respondents (See Table 1). Previous research found these traits to be positive characteristics along likableness and desirability dimensions [1,3].

Of the 10 most frequently selected traits, experts and novices differed on one pair of traits in which 40% of the experts selected imaginative as a desirable trait compared to 16% of the novices, $X^2(1)=10.28$, $p<.05$. Surprisingly, 20% of the experts and 4% of the novices indicated that imaginative as not applicable to the voice mail system they used but selected imaginative as a desirable trait in voice mail. Both novice and expert associative ratings of imaginative were significantly lower than the overall mean ratings across the top 10 desirable traits (mean=5.22, SD=1.71), $t(10)=2.61$, $p<.05$. The results suggest that voice mail user interfaces need to be more imaginative.

Future investigations should explore how a more imaginative personality can be incorporated into voice mail systems. In addition, more work needs to be done to

determine how users could benefit from imaginative personalities.

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