IVR Technologies

Industry Sponsor
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Acknowledgments

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Agenda

• What we were tasked to create
• Previous project summary
• What is IVR?
• Project Goals
• System Design and how it works
• Our milestones
• Future implementations
• Other ways to implement IVR
• Demonstration of final product
• Conclusion
Physical Layout

- Sip.conf
- Extensions.conf
- Asterisk server
- php
- MySQL
- Cisco ROUTER
- PSTN
- POTS/Cellular/VoIP
- Mobile Device
Team Members:

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Objectives

• To create and display a working Interactive Voice Response (IVR) system to accept credit card payments for pizza orders

• Implement our IVR system with an existing system created by the previous group project
Previous Groups Project

Goals

• Create an automated IVR pizza ordering system
• A successful call leads to placing an order
• Confirm the order and store information in a database
• Calls will be made using softphones and connected to the network
Phase I Flowchart -
Call Received

1. Incoming call
2. Greeting
3. Get Order
4. Enter Phone Number

5. Get Size
6. Sm, M, L, XL
7. Get Crust
8. Hand-tossed Pan Thin
Phase I Flowchart -
Ordering Process

Get Type

Specialty?

YES

A

NO

B

Get Specialty

Hawaiian
Meatlovers
Pickle
Vegetarian

Get Toppings

Mushroom
X-cheese
Pineapple,
Bacon, etc
Phase I Flowchart - Confirmation Process

Verify Order

Correct

Query Database For price

Give Price

Fix Order

Confirm Order

Create Order

End
What is IVR?

**Interactive Voice Response (IVR)** is an interactive technology that allows a computer to detect voice and/or keypad inputs then transcribe it into text that the computer can understand and respond to accordingly.
Project Goals

• Design a fully functional IVR system with several menu options

• A system that allows its users to easily navigate the different menu options and allow them to enter and verify credit card information for payment purposes

• Address the long wait times customer have come to expect when calling into large companies
System Design

Tools used to create our IVR system:
System Design

- Developed using an open source communications platform called Asterisk for a Linux environment.
- Programmed using PHP
- User dials in the extension number assigned to the IVR to commence the session
- Three stage layout:
  1. Credit Card type
  2. Verification process
  3. Menu Options
- User can hang up the phone to end the session
How it Works

• PHP is a powerful server-side scripting language for creating dynamic and interactive websites

• PHP syntax is very similar to Perl and C. PHP is often used together with Apache (web server on various operating systems)

• Change text to voice

• Create sound files for the IVR system
  • Sound files need to be placed in the correct folders or errors can occur

• To create the functions in PHP and each time it is needed it is called upon
Road Blocks

• Lack in expertise in VoIP systems
• Little expertise with the Asterisk platform
• Lack of PHP programming experience
Milestones

• Develop the IVR system for credit payment

• Integrate our IVR payment system with the previous groups pizza ordering system

• Create a working demonstration
Future Integrations?

• Create a text file of the order that can be sent via E-Mail to the customer

• Develop an extension that will allow a user to contact a Customer Service Representative

• Create a web-based ordering system that utilizes PHP
# Other IVR Applications

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<td>Change flight</td>
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<td>Travel insurance/ emergency situations</td>
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DEMO
Conclusion

• This project helped us to better understand the procedures and work involved in managing a project

• Helped us to manage our time more efficiently and complete the project task within the given timeframe