Agenda

- History of a Virtual Assistant
- Virtual Assistant on the Web
- What do the Experts say about a Virtual Assistant?
- How did Val come to be?
- How Does Val Work
- Results.
- Lessons Learned.
- The Future.

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History of a Virtual Assistant

- 2003, U.S. Defense Advanced Research Project Agency (DARPA) funded SRI International (bought by Apple in 2010).
  - Laid basic foundation for what would become Siri.
  - Original purpose was to help Military Commanders with information overload.
  - Called Cognitive Assistant that Learns and Organizes, (CALO).

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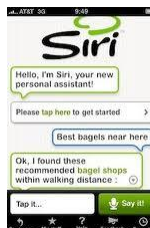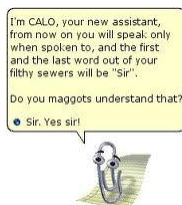
History of a Virtual Assistant

- # IBM's Watson
  - Became famous beating Ken Jennings, and everyone else, on Jeopardy in 2011.
  - Traces its roots to Deep Blue who beat Gary Kasparov in Chess in 1997.
  - Took 7 years to get Watson ready for Jeopardy appearance.

History of a Virtual Assistant

- Virtual Assistants are very popular in Mobile Phone Markets:
  - Siri (Apple, 2011)
  - Eva (Android, 2012)
  - Cortana (Microsoft, 2014)

- Contrary to Popular Opinion, Siri was not the spawn of SkyNet, Hal9000 or GLaDOS.

- The Future of Virtual Assistants will see them go from the Mobile Phone to the Web.

Virtual Assistant on the Web

- Computer Generated
  - They look like a human, and can confuse your clients who often think they are talking to a live person.
  - Appearing in more Websites every day.
- Conversational
  - They have personalities, if you let them.
  - They work 24 hours a day, but they can also have fun.
- Natural Language Understanding
  - Think Google search terms.

Virtual Assistants

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Virtual Assistant on the Web

- A powerful tool that learns through continual refinements.
  - What worked today is thanks to what did not yesterday.
  - Constant tweaking leads to a better tool.

Define

Design

Build

Validate & Test

Deliver & Launch

Measure & Evaluate

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What do the Experts say about a Virtual Assistant?

- 72% of US online consumers prefer to use a company's Website to get answers to their questions rather than contact companies via telephone or Email – **FORRESTER**

- 57% of Inbound calls come from customers who were already on your Website – The Customer Contact Council **CEB**

What do the Experts say about a Virtual Assistant?

- By 2015, 50 Percent of online customer service search activities will be via a Virtual Assistant for at least 1,500 large enterprises
- Research from 2013 shows more than 1,500 organizations are in various stages of production with Virtual Assistants
  - Results show:
    – Profound cost savings
    – Increased capacity in Contact Center
    – Increased customer loyalty
    – Entertained by robotic presence on Website

Gartner

What do the Experts say about a Virtual Assistant?

- Running your company as if customers want to talk to you isn't just expensive, it's potentially undermining your efforts to build longer-term loyalty.　CEB

- Customer Contact Council research shows that customers who attempt to self serve, fail, and are forced to pick up the phone are 10% more likely to be disloyal than those customers who were able to fully resolve their issues in their channel of choice.　CEB

ntact center May 6-9, 2014 • San Diego

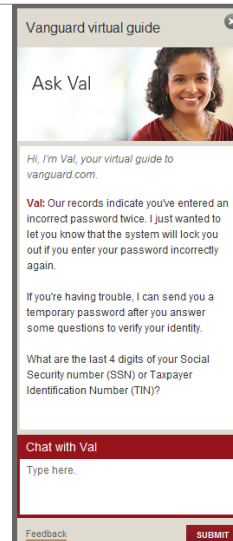What do the Experts say about a Virtual Assistant?

- According to Gartner Virtual Assistant Capability growing 20% each year especially in:
  - Travel
  - Consumer Goods
  - Telecommunications
  - Finance

Gartner.

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How did Val Come to Be?

- Vanguard's Innovation and Research Team.
  - Tasked with investigating new technologies.
  - Partner with Business Clients to explore technically driven solutions
  - Volunteer effort, think Google 20% time.
- Top 10 reasons for calls into Contact Center identified.
- A number of technologies were explored to tackle 'Problem' calls.
- Virtual Assistant was ultimately chosen as a quick test case to see if VA technology would work.

Vanguard virtual guide

Ask Val

Hi, I'm Val, your virtual guide to vanguard.com.

Val: Our records indicate you've entered an incorrect password twice. I just wanted to let you know that the system will lock you out if you enter your password incorrectly again.

If you're having trouble, I can send you a temporary password after you answer some questions to verify your identity.

What are the last 4 digits of your Social Security number (SSN) or Taxpayer Identification Number (TIN)?

Chat with Val

Type here.

Feedback   SUBMIT

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How did Val Come to Be?

Compelling Industry Use Cases:

- Healthcare firm saw 29% drop in enrollment calls after deploying Virtual Assistant.
- Major Airline handles over 75,000 questions per day with Virtual Assistant.
- Regional company eliminated the use of Live Chat after implementing Virtual Assistant.
- Military branch of service uses Virtual Assistant for 97% of their interactions without human intervention.

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How did Val Come to Be?

There were a number of potential Use Cases:

- ## Improve Search on the Web
  - 21% of Web Fallout into Contact Center
- ## Clients Quit Buy/Sell/Exchange due to confusion
  - 10% of Web Fallout into Contact Center
- ## Web Security Reset
  - 7% of Web Fallout into Contact Center
- ## Clients Quit Add a Bank due to confusion
  - 4.5% of Web Fallout into Contact Center

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How did Val Come to Be?

Original Workflow chosen was Login Help

Why Logins?
- Limited well defined scope
- Small footprint on Vanguard.com
- Minimal brand strategy needed
- Easily measurable
- Could be taken away with minimal impact

Log on

You must be logged on to continue.

User name

LOG ON

VIRTUAL ASSISTANT

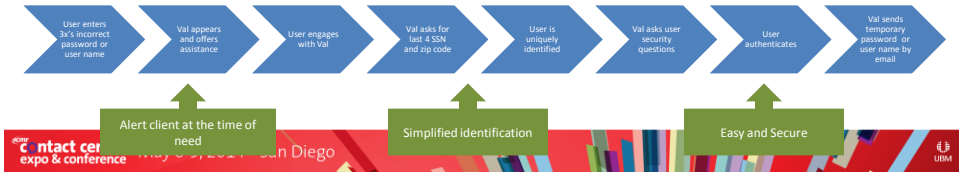If you're having trouble logging on, our virtual assistant may appear on your screen.

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How does Val work?

Who is Val?	Why Val?
Val is a Virtual Assistant that is available on our Website when clients have forgotten their user name and/or password and are having difficulty logging in.	One of the primary reason why clients call is to seek assistance with logon issues. Val can help client's by sending the username or temporary password , therefore decreasing the number of clients who disable their password and increasing self provisioned password resets.

When will clients see Val?	Value of Val

User entered username or password incorrectly twice

- Val launches automatically and enters into the identification/verification workflow. (Client must engage with Val to complete).
- Resolution: Upon success, send username or password to email address.
- Only those registered web users who enter an incorrect user name or password more than 2x's will see Val.

Val **recognizes trouble and warns** the user of a potential account lock out. Today clients are locked out of their account after 3 attempts and required to complete the password reset web form or **call a Vanguard associate.**

Password Lockout - 50%

MVT results

We **improved the reset username/password flow** to make it **interactive and easier** on clients by removing full SSN for a unique client match.

Password Reclamation - 25%

MVT results

MVT users assigned: approx. 130k each variation 1/30 - 5/6

NEED HELP?

Ask Val ▦
for help logging on.

Hi, I'm Val, your virtual guide to vanguard.com. I just want you to know, the system will lock you out if you enter your password incorrectly again.

If you're having trouble, I can send you a temporary password after you answer some questions to verify your identity.

High level flow and key wins

User enters 3x's incorrect password or user name → Val appears and offers assistance → User engages with Val → Val asks for last 4 SSN and zip code → User is uniquely identified → Val asks user security questions → User authenticates → Val sends temporary password or user name by email

Alert client at the time of need | Simplified identification | Easy and Secure

Results

- After answering a series of questions, the Client will have their Secure Information emailed to them.
  - Last 4 of SSN
  - Zip Code
  - Identifying Security Questions
- Goal is to make it easier to interact with an Avatar, than picking up a phone and interacting with a Human Being.

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Results

- Elevated to Production in August of 2013
  - Initially averaged 400 successful transactions per day.
- Tweaks to Language Model and Better Communication to clients in October of 2013
  - Average jumped to 600 per day
- Further tweaks to Language Model in December of 2013
  - Average now sits at around 1,100 successful transactions per day.
- When you consider that each transaction is a potential Phone Conversation you can see the benefits to having a Virtual Assistant.

Lessons Learned

- Delivering a Virtual Assistant to production is not a trivial effort.
  - Fully understand the workflow you are implementing.
  - Think of the security concerns if you are doing secure lookups, you will not have a Human to catch mistakes.
  - Prepare your clients, you cannot simply put an Avatar on your site, you must communicate this information.
- Successful integration requires more than just an API.
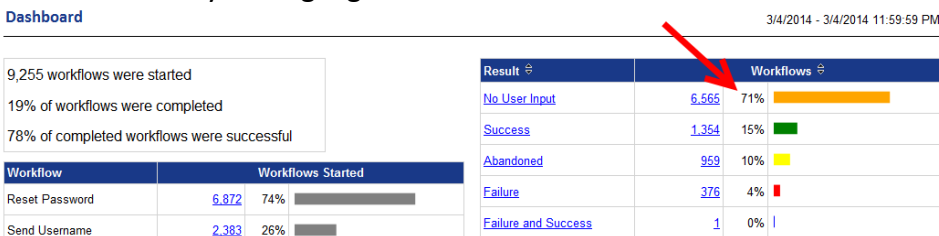 - Every solution is different, this is not Plug and Play.
  - Plan Plan Plan……….

Lessons Learned

- When you understand your client's problems you can start to understand where to attack with a Virtual Assistant.
  - A problem call is a potential IVA workflow.
  - Why are they picking up the phone?
- Targeted Deployment is most effective.
  - There is a lot an IVA can do, but you'd better have a plan.

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Lessons Learned

- Don't underestimate your clients.
  - You will be surprised how quickly clients will talk to an Avatar, even when handling sensitive data.
- Don't overanalyze the data.
  - You will be surprised how many clients will not talk to an Avatar.
  - Industry Average Ignore rates are 75-80%

Dashboard   3/4/2014 - 3/4/2014 11:59:59 PM

9,255 workflows were started

19% of workflows were completed

78% of completed workflows were successful

Workflow		Workflows Started	
Reset Password	6,872	74%	
Send Username	2,383	26%	

Result ⇕		Workflows ⇕	
No User Input	6,565	71%	
Success	1,354	15%	
Abandoned	959	10%	
Failure	376	4%	
Failure and Success	1	0%	

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The Future

- Initial results have been very positive.
  - Some clients do not like this tool and see it as intrusive and tells us, but the number of clients using this tells us that it is worth pursuing further.
- More clients are using this tool than we anticipated.
  - Initially we felt 2-300 a day would be a good number.
- The more a client uses this tool 'effectively' the less likely they are to call us.
- We are examining ways to expand the field of use to other 'Problem Calls'.

Questions?