Platforms
BOT DAY
Hello!

@andymauro
www.automat.ai

• 16 years building conversational AI technology

• Launched first enterprise mobile voice assistant Nina @ Nuance

• Co-founder & CEO @AUTOMAT
Who is this for?

- Company Thought Leaders
- Developers & Entrepreneurs
- Platform Providers
definition

The teacher explained the definition of the new vocabulary word.
How we got here 1999 - 2015

All information publicly available online

1999
- Founded Nuance
- Acquires Tellme

2000
- Mar 2000 IPO

2007
- Apr 2007 Acquires Tellme
- GOOG-411

2010
- Feb 2010 Siri

2011
- Oct 2011 Siri 4S

2012
- Jun 2012 Google Now
- Aug 2012 Nina

2014
- Apr 2014 Cortana

2015
- Jun 2015 Echo
- Aug 2015 M

1999
- Founded Google

2000
- Google IPO

2007
- Apr 2007 Acquires Tellme

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- Siri

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- Apr 2014 Cortana

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- Jun 2015 Echo
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### Lessons from IVR & Mobile VAs

<table>
<thead>
<tr>
<th>Brand Matters</th>
<th>CUI + GUI Persona $\neq$ Brand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Language is Necessary</td>
<td>Users will type. CLU needed for optimal experience</td>
</tr>
<tr>
<td>Inertia $&gt;$ Slightly Easier</td>
<td>New use cases - different not just better</td>
</tr>
<tr>
<td>VAs Too Hard &amp; Expensive</td>
<td>Bot creation must be self-service</td>
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For those of you considering doing customer service with bots

— how are you doing better than this...
Please hang up now. Have a nice day.
Switching to messaging as a channel isn’t enough — what breakthroughs in conversational technology are you applying to actually help users?
Platforms rush to open to developers in 2016

Already Open

March
April
May
June
The bot platform ecosystem and the emerging giants

Nearly every large software company has announced some sort of bot strategy in the last year. Here's a look at a handful of leading platforms that developers might use to send messages, interpret natural language, and deploy bots, with the emerging bot-ecosystem giants highlighted.

General AI agents with platforms
Developer access available now or announced

[Diagram showing logos and names of platforms like Siri, Alexa/Echo, Cortana, Google, Amazon, Microsoft, and Viv Labs]

Messaging platforms

[Diagram showing logos and names of platforms like iMessage, Messenger, WhatsApp, Slack, WeChat, Kik, Allo, Telegram, Twilio, LINE, and Skype]
If you’re interested in bots, attend O’Reilly Bot Day. Register at oreilly.com/bots.
 Definitions

“There’s no sense in being precise when you don’t even know what you’re talking about”

- John von Neumann
What’s a bot?

“Bots are digital users within a messaging product. Unlike most users, they are powered by software rather than by a human, and they bring a product or service into a given messaging product via conversation.”

- Amir Shevat, developer relations lead at Slack
Platforms we’re talking about today

Consumer messaging:
- Facebook
- WhatsApp
- Allo
- Line
- Kik
- Skype

Enterprise messaging:
- Slack
- Microsoft Teams

Assistants:
- Google Assistant
- Amazon Alexa
Assistants are generalists
Bots are experts
Assistants will eventually invoke bots to do domain specific work.
Different types of bot interactions

- **Person to Bot (P2B)**: inbound, e.g. StatsBot
- **Bot to Person (B2P)**: outbound, e.g. Howdy, Kyber
- **Person to Person to Bot (P2P2B)**: group chat intermediated by bot, e.g. Streak Trivia
- **Bot to Bot to Person (B2B2P)**: bots coordinating on behalf of people and informing or requesting clarifying info, e.g. x.ai
### Different types of threads where bots can live

<table>
<thead>
<tr>
<th>Type</th>
<th>Characteristics</th>
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<tbody>
<tr>
<td>Consumer Messaging</td>
<td>Threads are with people</td>
</tr>
<tr>
<td>Enterprise Messaging</td>
<td>Threads are about topics</td>
</tr>
<tr>
<td>Voice Assistants</td>
<td>One shot, no persistence</td>
</tr>
</tbody>
</table>
Anatomy of a Bot

Persistent Menu

Cards & Carousel

Content action buttons

Quick replies

Text, emoji, stickers, images, audio, video, files

Keyboard suggested replies
Bot Discovery

Buttons & Scan Codes
- Message Us
- Send to Messenger
- Add to Slack

Bot Stores

Share bot/content

Promotion
“We are focused on facilitating messages from businesses that provide meaningful value to the people who receive them”

- David Marcus
Facebook Messenger - Demographics

- 1B monthly active users
- 33K bots
- 34K developers
- 45K developers on wit.ai NLU Platform (old number, being updated soon)
Facebook Messenger - Business Features

- Supports account linking (no PCI/HIPPA, etc)
- Supports payments (US only)
- Messenger Ads + promoted bots + scan codes
- Supports bot & content sharing
- Robust web client - messenger.com
Early but evolving partner program

2 major updates since April launch
### Facebook Messenger - UX Features

<table>
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<tr>
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<td></td>
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Messenger has 1B users and the most features

Would like to see more data about what is & isn’t working to speed finding customer value
“Chat is the new browser, bots are the new websites”

- Ted Livingston
Kik - Demographics

300M users, 40% of US youth, 100 min/week, 42% female, 58% male, 44% 13-19 years old

20K bots on Kik, 1.4B messages with bots

Guess: 10-15K developers

No open AI platform
Kik - Business Features

- Many user security features. No PCI/HIPPA, etc.
- Kik points earned towards real purchases.
- Bot shop with 111 bots, 45 entertainment, 43 lifestyle, 23 gaming + scan codes + sponsored bots.
- Supports bot sharing + @ mentions.
- No web/desktop support.
Kik - Partner Support

Mature and improving partner program

Handful of feature updates since April launch
Kik - UX Features

- Greeting
- Text
- Image
- Video
- Keyboard Suggested Replies

- Card w/ buttons
- Carousel
- Text w/ buttons
- Quick Replies
- Persistent menu
- Typing delay
Kik provides the best access to teens and has the most distribution options.

Would like to see higher degree of parity with UI features, regular release cycles + desktop support.
“Human language is the new UI layer, bots are the new applications, and digital assistants are meta apps...intelligence is infused into all of your interactions ”

- Satya Nadella
Microsoft - Demographics

300M monthly active users in Skype (add to this Skype for Business + Cortana)

63 in the Bot Directory

45K developers on Bot Framework

Unknown # of developers on LUIS NLU Platform (Guess ~ 45K). Cognitive Services provides speech, vision, knowledge & search as well
Skype - Business Features

- Solid OTA security (no PCI/HIPPA, etc)
- no native monetization (yet)
- Microsoft Bot directory & easy to add bots inside Skype for desktop & mobile
- No easy way to share bots (yet)
- Robust Win/MacOS desktop apps
Microsoft - Partner Support

- Very active in the community, a leader in the open bot community
- Frequent cross-platform updates since March release
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Microsoft provides the most open and complete AI developer platform & is all-in on conversational interfaces.

Would like to see bots opened up on more Microsoft business platforms (LinkedIn anyone?)
“We want to build each user his or her own individual Google”

- Sundar Pichai
Google Allo

Launched Sept 21 - small but growing

Bot platform opening by end of 2016

~40 companies in early access program including Foursquare, Jelly, CNN, Spotify, etc

60K developers on recently acquired api.ai NLU Platform
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Allo has presented a bold vision for a bot in every pocket and has the complete stack to deliver it.

Would like to see Google build a substantial Allo user base, and provide more details about where developers fit into ecosystem.
“Some of the most important software product categories that will evolve in the next couple decades are going to be driven by conversational interfaces powered by AI... to further enhance people’s productivity”

- Stewart Butterfield
Slack - Demographics

- 3M daily active users, average 10 hours/day. 17K integrations installed 3.6M times
- 90% of teams use on average 8 apps/integrations, 135 bots in App Directory
- Unknown # of developers (likely large), also has $80M Slack Bot Fund to support developers
- No open AI platform
Slack - Business Features

- Rich & improving admin controls. No PCI/HIPPA, etc
- No native monetization support (yet)
- App Directory with 17 app categories
- Install on Slack button + supports @mentions for group chat including bots
Slack - Partner Support

Very strong developer support (Slack Fund support is off the charts good)

Major Button + Event API additions in last few months
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Slack owns modern business messaging, has incredible dev support and is committed to bots in the workplace.

Would like to see higher degree of parity with UI features, large enterprise support, and equivalent focus on mobile client as desktop.
Other bot platforms

WhatsApp: 1B users. No official bot support

WeChat: 800M users (mostly APAC). Open/mature bot APIs

Line: 215M users (mostly APAC). Open/mature bot APIs

Telegram: 100M users (mostly EMEA). Open/mature bot APIs
The elephants in the room

- 1B users
- Open APIs for stickers and app-like functionality
- Client side dev model (all others server)
- Distribution through iMessage Store
- No access to message text

- No known plans to open bot capability
Platform Suggestions
Anatomy of a Messaging Bot

- Get what I’m looking for
- Actions on the thing I’m looking for
- Menu style navigation
- Ask for what I want
- Suggest things I may not have thought to type
## Messaging Platform Wish List

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<tr>
<th>Bots Initiate</th>
<th><strong>Bot says hi, not just user</strong></th>
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<tr>
<td>Ghost Text</td>
<td><strong>Configurable “Type a Message” prompt</strong></td>
</tr>
<tr>
<td>Platform Parity</td>
<td><strong>Innovate on use cases not platform translation</strong></td>
</tr>
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</table>
Thanks!

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