

# **A Really Simple Guide to Bots**

## **Volume 1**

### **Bots Save Business, and People, Time, Money and Stress**

A lot of people don't understand bots. They find them confusing, they don't really understand what they can do and where to use them.

So, here at

**[The National Bots Centre](#)**

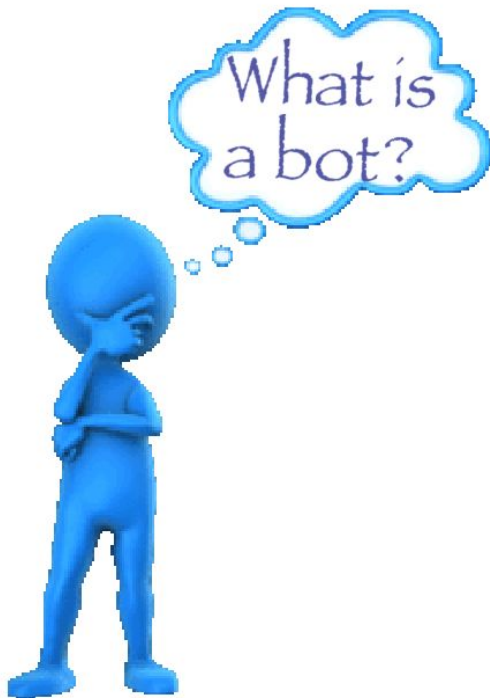
we've produced some really simple guides to bots

This is the first in the series

# **A Really Simple Guide to Bots**

starts on the next page

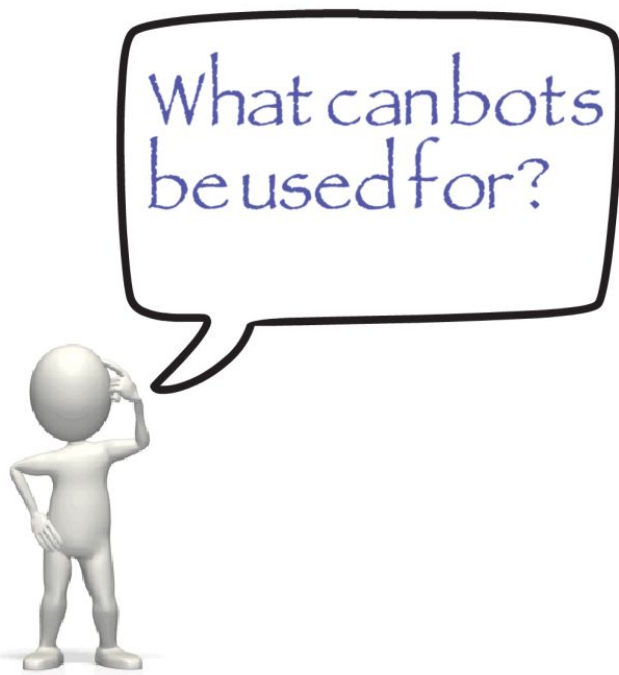




A bot is simply an automatic or semi-automatic device that is designed to carry out mundane and repetitive tasks. In this document I'm only looking at communications bots.

Others run things like Google Analytics, PPC routines, autoresponders and the out of office on your email.

Bots are much more common than we might expect. Siri, Cortana and Alexa are all bots and can carry out quite complex tasks.



Bots can be used to do all sorts of routine tasks such as .....

- Arranging bookings or meetings
- Acknowledging emails
- Answering email
- Answering the phone
- Making phone calls
- Providing answers to phoned enquiries
- Answering Chatline queries
- Training
- Taking restaurant reservations.

In fact bots can be used to carry out routine tasks wherever there is a digital interface. For example a bot can take an incoming phone call on a landline or Skype and answer it for you in various ways. It can

then add the callers details to your CRM system if you have enabled this.



Yes. There are two major types of communications bot.

The first is programmed with answers to FAQs and responds to them. It can only provide the answers programmed into it.

The second type of bots are more “intelligent” and can look for answers beyond those programmed directly into its knowledge banks. For example it might be asked for a weather forecast for a given

area. This clearly cannot be programmed into the knowledge bank on a regular basis but the bot can be programmed to visit a weather site and provide the answer given on that site, even though the answer is changing as the forecast improves or changes. In this sense it is intelligent.

There is another way in which bots differ.

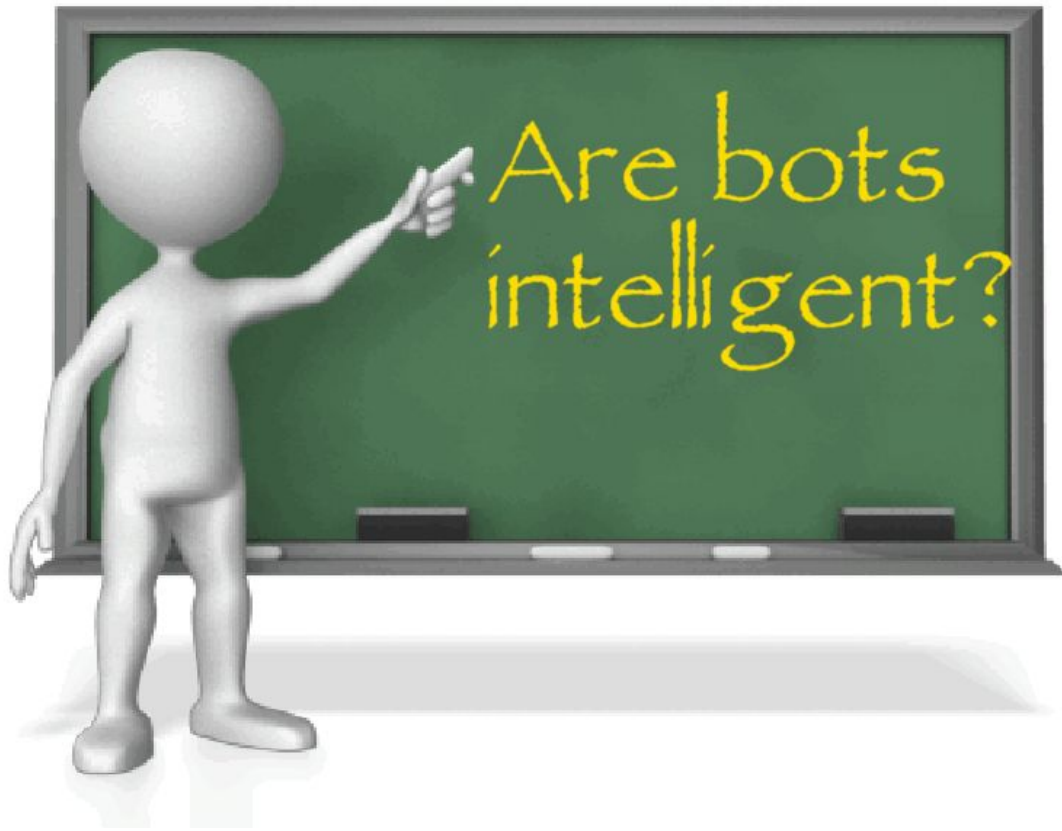
Some bots are designed to work on single platforms. For example to book appointments on your website or work with Facebook Messenger. These are platform specific bots.

Other bots are platform agnostic and can work on any platform you link them to. So the same bot can work on social media, your website, your CRM and a host of other places. In all cases it will use the same structure, knowledge banks and processes but can do so on any digital platform.

Thirdly bots differ in the type of query and response they can provide. Some like Siri and Alexa take audio input and provide audio output. Others can only respond to written input and respond in the same way.

In some cases a hybrid form of bot exists that can handle both written and spoken input. Written input may not need to be in a human language as bots can be designed to respond to numerical or machine language inputs. Examples might be a bot that responds to rainfall or river water levels to trigger a flood alarm that may result in an automated phone call to people and businesses on a floodplain.

Of course a bots response may not be in the form of a single answer. It might be used to carry out a series of further responses based on the answers provided. In some cases this is via Natural Language Sequencing.



Not in the sense that you and I are recognised as being intelligent. However some can pass the Turing test. Put simply the Turing test, named after Alan Turing, measures a machine's ability to exhibit intelligent behaviour equivalent to, or indistinguishable from, that of a human. In other words, if you communicate with a bot and don't realise it is a bot, it has passed the Turing test as being “intelligent”.

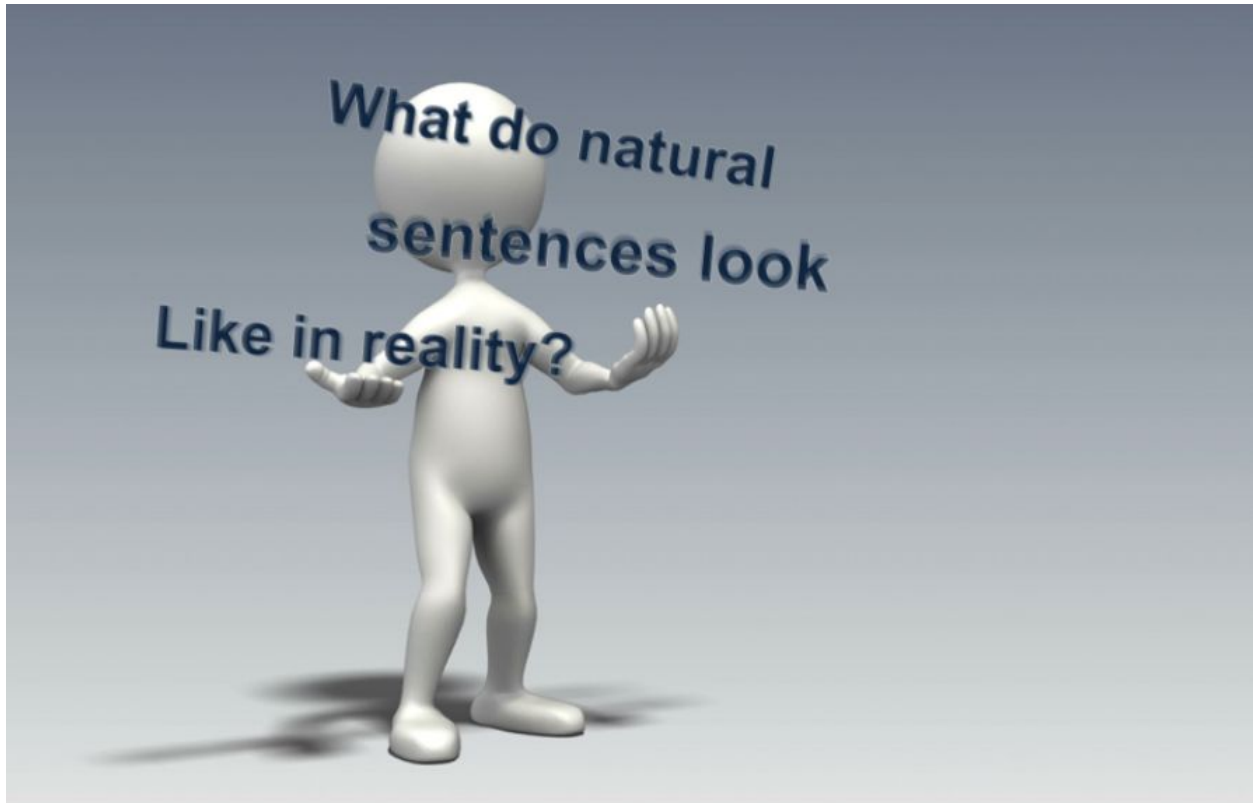


Most commonly used bots however are programmed to recognise specific words that trigger a preprogrammed response and exhibit no intelligence whatsoever.

Interesting guy some bots can learn but are not intelligent in the sense of being able to pass the Turing test. But they do use machine learning to improve their responses. For example, in response to a question the bot may offer a series of possible answers. If a given answer was always rejected it would learn not to provide it again. Likewise answers that prompt positive responses will be provided more often as will related answers. Another example would be where software such as used to split test responses to adverts is used. Those ads with better CTR scores will be favoured by the bot with poorly responded ads being relegated.

## **Are bots new?**

Absolutely not. Bots have been around for decades. For example the speaking clock was an early bot. It responded to a phone call by giving the correct time from a series of prerecorded answers.



## **Natural Language Sequencing**

If you pose a closed question to a bot such as. “Is it raining today?” It is most likely to answer in terms of your location with a simple yes or no.

But if you ask a more complex question or ask a more complex question you can enter into a complex conversation with the bot.

You might phone a pizza place to place an order. The bot will say something like “Can I take your order?”. You say you want a Quattro Stagioni.

The bot might then ask you a further series of questions such as the size required, the type of crust, if you want anything else, the delivery address and payment type. That's a complex interaction.

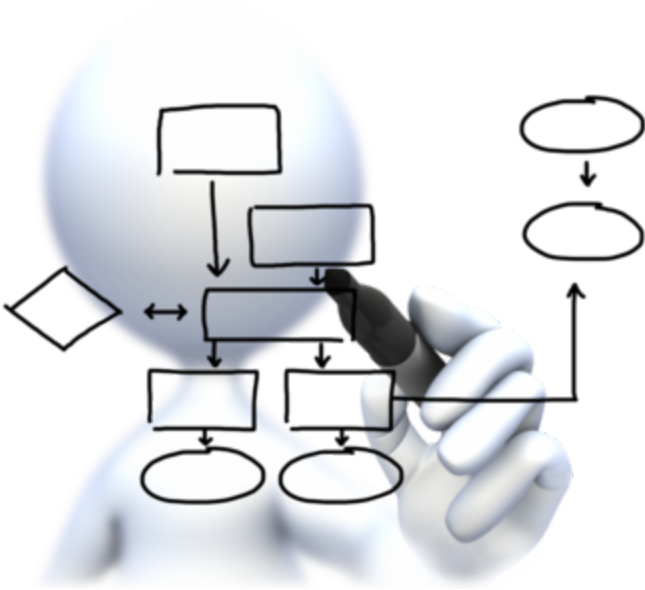
The conversation you have with the bot consists of a natural sequence of questions and answers based on your responses. To programme this non intelligent bot you have to think in terms of a natural question and answer process. What answers might the human provide if asked what size pizza they want? It might be small, regular, large etc. But when programming the bot you'll need to perhaps add these words in Italian as well, simply because when asked the question by an Italian pizza place they might respond with piccolo or grande. So creating natural language sequences is a sequential process but not necessarily simple.

Another complication is the wide range of answers to a simple question around the toppings .. many pizza places offer 40+ toppings. These all need programming into the bot. They also need to be understood by the bot. That's easy when written,

unless badly misspelled, but much harder when spoken.

A further complication is that even with simple binary or yes/no answers the response strands soon branch out into a rather complex hierarchy. Where the responses are more complex we can soon find a tangle of strands that become very difficult to maintain. The art is to reduce complexity to simplicity. It can be done but requires very careful planning.

## Training Bots



Training bots aren't really new but they do have loads of advantages over a human trainer .. and it has to be admitted some disadvantages.

The advantages include being available 24/7, being very patient, they improve information retention, can access additional training materials from their knowledge bank or the internet, test knowledge and understanding at all stages of the learning process, detect and focuses on the student's' learning style .. and much more.



## Will bots steal my job?

No.

Bots undertake tasks and most jobs consist of a large number of tasks.

Bots are designed to undertake mundane and routine tasks NOT to carry out all the functions and tasks within a job. And for every bot produced, or implemented, someone has to programme the bot!

[The National Bot Centre](#)

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