

Highway Bytes Scenario

You are director of customer services at Highway Bytes, which markets a series of small, handlebar-mounted computers for bicyclists. These Cycle Computers do everything, from computing speed and distance traveled to displaying street maps. Serious cyclists love them, but your company is growing so fast that you can't keep up with all the customer service requests you receive every day. Your boss wants not only to speed up response time but also to reduce staffing costs and allow your technical experts the time they need to focus on the most difficult and important questions.

You've just been reading about automated response systems, and you quickly review a few articles before discussing the options with your boss. Artificial intelligence researchers have been working for decades to design systems that can actually converse with customers, ask questions, and respond to requests. Some of today's systems have vocabularies of thousands of words and the ability to understand simple sentences. For example, chatterbots are automated bots that can actually mimic human conversation. (You can see what it's like to carry on a conversation with some of these bots by visiting www.YVch.com. 7`JW`"HU`_`hc`9`Vchz`h`Y`V`UH`ch`"hc`ghUfh`U`V`UhgYgg]cb")

Unfortunately, even though chatterbots hold a lot of promise, human communication is so complex that a truly automated customer service agent could take years to perfect (and may even prove to be impossible). However, the simplest automated systems are called *autoresponders*, or *on-demand e-mail*. They are fast and extremely inexpensive. They have no built-in intelligence, so they do nothing more than send back the same reply to every message they receive.

You explain to your boss that although some of the messages you receive require the attention of your product specialists, many are simply requests for straightforward information. In fact, the customer service staff already answers some 70 percent of e-mail queries with three readymade attachments:

- **Installing Your Cycle Computer.** This attachment gives customers advice on installing the Cycle Computer the first time or reinstalling it on a new bike. In most cases, the computer and wheel sensor bolt directly to the bike without modification, but certain bikes do require extra work.
- **Troubleshooting Your Cycle Computer.** This attachment provides a step-by-step guide to figuring out what might be wrong with a malfunctioning Cycle Computer. Most problems are simple, such as dead batteries or loose wires, but others are beyond the capabilities of your typical customer.

- **Upgrading the Software in Your Cycle Computer.** This attachment tells customers how to attach the Cycle Computer to their home or office PC and download new software from Highway Bytes.

Your boss is enthusiastic when you explain that you can program your current e-mail system to look for specific words in incoming messages and then respond, based on what it finds. For example, if a customer message contains the word installation, you can program the system to reply with the Installing Your Cycle Computer attachment. This reconfigured system should be able to handle a sizable portion of the hundreds of e-mails your customer service group gets every week.