Artificial Intelligence Goes Mobile with ClickButler

The Story of an English Lord and His Butler

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It’s morning. Brent, the long-time butler of Lord Lloyd, opens the car door for his boss, who steps into the back seat of his Bentley. Brent simply asks, “Going to the House of Lords, Sir?” Lord Lloyd just taps on the glass, signaling a “yes”, and begins to read the morning paper (on his tablet, of course).

Upon arrival at the House of Lords, Lloyd goes into session, while Brent joins the Butlers’ “Assembly” in the parking lot. What is going on in the Butlers’ Assembly is actually not less important than what is going on inside the House of Lords. Brent keeps his ears open and is happy to share, and mostly collect, all sorts of information that his boss may find useful—from local economics, to love stories and affairs, all the way to the Queen’s politics.

By 11AM, the Lords’ session is over. Lord Lloyd—still pre-occupied with politics—walks towards his car, where Brent greets him, and adds that they will shortly be on their way to the Polo Club for Lloyd’s weekly game, which will be followed by lunch. Again, Lloyd simply nods and steps into his Bentley.

Upon arrival, Brent hands Lloyd a prepared bag with the appropriate clothing, shoes and other items for the Polo match. As Lloyd steps into the gathering area, Brent goes to the horse stables, to make sure that Jimmy (Lloyd’s preferred horse for Mondays) is ready, and then joins his fellow butlers to watch the match. You’ll note that up until now Lloyd hasn’t had to say a word except for a simple “yes” or “no” to points prompted by Brent.

As they are driving back home, Lloyd turns on his tablet again, only this time to read “Brent’s News of the Day”. Lloyd becomes specifically interested in the news surrounding his neighbor Lord Forester and his financial troubles. As much as he sympathizes with Forester, he wants to be the buyer of his house when the time comes. Lloyd is not at all surprised to see that Brent has already prepared a full folder with links to GoogleEarth, the most recent market pricing of properties in the area, and other information he gathered in his conversations with his fellow butlers. Lloyd marks the topic with an ALERT symbol, signaling to Brent he desires to be kept up to date on further developments.

That’s Brent. He is always one step ahead of Lloyd, anticipating Lloyd’s needs, alerting him and proactively acting with the greatest efficiency. In his communications he avoids “open” questions but rather presents Lloyd with concrete alternatives to select from; alternatives which are right for the current context. Most of the time, Lloyd just nods his head, or just says “yes” or “no”. If there is a need for more information on any subject, Brent will seek it out and provide it to Lloyd.

And that’s how life goes for Lord Lloyd and his butler Brent with a clear understanding of the role each one plays. The role of the butler is that of an intelligent personal assistant, aimed at freeing the Lord to deal only with what he wishes to, or has to deal with, or what is best to do himself. The rest will be taken care of by the butler. A bit of “Chief of Staff” flavor may come into the picture in places where the butler also has to manage the Cook and the Gardener. The butler is the Lord’s “extension”, his delegate. A butler is certainly not just a “dumb” servant who does not do anything unless told to. He anticipates, alerts and acts proactively.

Modern day life provides us with many examples of a butler’s role such as the President’s Chief of Staff, or a CEO’s Personal Assistant (PA). These are often the people running things behind the scenes to optimize their boss’ performance. It is a team effort.

What about computerized butlers and personal assistants? These are now emerging for consumers, for example: Siri from Apple and Jelly Bean from Google. ClickSoftware’s focus however is on the business world. Imagine if every business professional had his or her own butler embedded within a mobile device. Someone that could predict their business needs—and possibly personal needs as well—and proactively take action to address them.

It was this idea that prompted ClickSoftware to embed ClickButler technology (patent pending) into the apps for mobile professionals. A fundamental pre-requisite for any of the above capabilities is context awareness, which in the business world requires a far higher level of sophistication than that of the consumer world. Similarly, the actions that need to be taken at a given business context. We are not talking about writing code to achieve a “butler-like behavior” for one or a few specific limited scenarios. This cannot scale at an organizational level, where numerous business scenarios need to be covered. The ClickButler technology brings together Artificial Intelligence, mobility, and mathematics to systematize the creation of butlers; including tools to configure them at a group and individual level,
because certain butler behaviors are derived from company practices and policies and thus are common to all users of the organization. Scalability is critical in the business world where a massive number of butler agents are running simultaneously, accessing common data sources, with potential interactions between the sources, the users, and the intelligent butler agents themselves.

The ClickButler will take user experience and productivity to new heights.

Business Scenario: Facilitating the Life of a Service Technician

Without ClickButler: A typical session of a service technician with his mobile software would proceed like the following: Upon starting the day, Frank, the field technician, swipes to the TaskManager app and finds out that his first job is at Ivy bank, 1 Main Street. To get driving directions to Ivy bank, he copies the address, swipes to the Navigation app on his smartphone and pastes the address in the destination field. He then proceeds to follow the directions. Once he arrives at the address, he now swipes to his Contacts app to find and touch his contact person’s phone number, so that he will be greeted by him at the lobby.

Swiping between apps and manually transferring data from one app to another is cumbersome, time-consuming, error-prone and annoying. If we can save 12 minutes per call for a person who on average delivers 5 jobs per day, we gain one extra hour per day! This is what the ClickButler technology enables.

With ClickButler: Upon logging in for the day, ClickButler simply states: “Your first job is at Ivy bank at 1 Main Street. Would you like navigation instructions?” Upon touching: “Yes”, the turn-by-turn travel instructions start automatically. Next, ten minutes before arriving at Ivy bank, ClickButler prompts: “Your contact people at Ivy bank are (a), (b), (c). Touch the one you wish to call”. Touching on (c) will automatically connect to the ContactList app to get the telephone number of (c), and then will automatically activate the Phone app, by dialing Mr. (c) who will greet Frank at the reception desk. Thus swiping and typing is minimized with ClickButler doing the leg work for the technician.

 Essentially ClickButler does the leg work for Shirley.

Business Scenario: Find Replacement for Calling-In Sick Shift Workers

Morning time presents Shirley, a Shift Manager at Belco, with a challenge. Two people, Peter and Patricia, who were scheduled for the morning shift, called in sick leaving two key positions unfilled. Belco has quite an elaborate policy for such situations, the result of long negotiations with the workers’ Union.

Without ClickButler: With the existing software, Shirley follows the company policy calling individuals one by one according to the sequence that the policy dictates until two people agree to come and fill in. This could take quite a long time.

With ClickButler: Recognizing the importance of two missing people and anticipating that Shirley would prefer to work quickly towards resolution, as soon as she logs in from home in the morning, ClickButler prompts Shirley that Peter and Patricia called in sick and that it is already working on finding replacements. While she is going about her morning routine, ClickButler initiates contact with candidate replacements in the order dictated by the company policy. Once a resolution is found, Shirley is informed, including the expected arrival time of the replacements. If the process takes too long, the ClickButler will periodically inform Shirley on the status, as well as the main obstacles, allowing her to relax constraints.

Essentially ClickButler does the leg work for Shirley.

For more information about ClickSoftware please visit: www.clicksoftware.com

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Following a long and successful academic career with positions at USC, Tel Aviv University and UCLA, Professor BenBassat established himself as one of the world’s leaders in the area of optimization, Artificial Intelligence and decision support software for a wide variety of applications. His research work was supported by DARPA (the U.S.’s Defense Advanced Research Project Agency); NIH (National Institute of Health); Ballistic Missile Defense Agency (via TRW); ARI (U.S. Army Research Institute); NASA; and NSF (National Science Foundation).

Professor BenBassat has published extensively in leading professional journals, led many executive training workshops, and has spoken at numerous industry events worldwide. In 1996 Professor BenBassat coined the term “service chain optimization” - as an analogy to supply chain optimization - and is considered the “guru” in this field. ClickSoftware, which emerged in 1997 from the consulting practice of Prof. BenBassat, is focused on mobile workforce management and service optimization products and solutions. Today ClickSoftware is the worldwide recognized leader in this space, with the largest number of proven deployed customers in a variety of industry verticals; including telecommunication, utilities, oil & gas, office equipment, capital equipment, retail, insurance, transportation, public sector, and more.

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