

## RPA – A New Tool for Accountants

By Eric Cohen, CPA



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In one of my recent blogs on the [thinktwenty20.com](http://thinktwenty20.com) webpage, I referenced a dear bookkeeper with whom I worked many ages ago, who had considerable challenges interpreting a changing payroll report from an external provider. Her challenge with getting the appropriate journal entries into the accounting system was a catalyst to my wanting to develop XBRL GL. So, I would like to discuss how RPA is like that bookkeeper, the good news and the bad news.

A number of vendors have emerged in the RPA space. You will often hear of three names in particular for solution providers: Automation Anywhere, Blue Prism and UiPath. These “overnight successes” have been around since 2003, 2001 and 2005 respectively. (Again, support for my statement in my last entry that this nothing new, just receiving more attention.)

I am going to focus on UiPath for our RPA proxy. Your choice between these three or another depend on the users who will be involved, the back office or consulting support available, certain architectural issues, and other considerations.

Let’s look at the bookkeeper’s situation:

1. Get the summary report.
2. Look in some specific places for the Net, withholdings, garnishes and other adjustments.
3. Write the numbers onto the template I provided.
4. Calculate the gross-up amount.
5. Calculate the company matches and other additional entries.
6. Create the journal entries by putting the payroll template numbers into the journal entry template.
7. Post

Guess what RPA can do?

1. Recognize when a file (for example, an email with an Excel or image file attached or a link to a web report) is recognized by monitoring the email.
  2. Perform optical character recognition on the image if necessary and look in specific places in the spreadsheet, image or web page for the relevant information.
  3. Pull out that information and write it into the payroll template.
  4. Take the resulting totals and additional calculations and write them into the journal entry template.
- ...and so on.

If, however, there are any changes to the input, calculations or outgoing system, RPA will fail miserably.

So, is RPA something a savvy business person can do? Or do you need to bring in a programmer?

### **Help on Tap**

You can actually do this without calling on a programmer. I have previously mentioned using the products from UiPath as a proxy for our exploration of RPA. There is a whole suite of products under that name, but the primary tool for setting up automations is called Studio. It is a drag-and-drop environment where, having come up with the tasks you wish to automate and the steps to do so, you bring over from a library of activities one-by-one the automation task necessary to do the work.

When I say Studio, I am actually speaking of an environment which has some options. I began with Studio in its more complex form. I have been a “programmer” for a living in the past, although I do not claim to be good at it. It put food on the table. It also means that I understand basic programming concepts. Many accountants have not had to work with variables and if ... then statements, and data types and conversions. Studio requires that knowledge ... and you can't always find a sixth grader when you need them.

But there's another front end, called StudioX. StudioX is designed for the business user, focusing on using Excel, or Gmail, or Word, or the Web. It still requires more structured thought and basic understanding of the applications you need to work with, but it isolates much of the coding from the user.

While StudioX and its equivalents from other solutions providers may not meet all of an enterprise's needs, it will be a useful tool for business people with a bit of tech savvy to begin to exploit RPA in their environments.

## But What About Python?

Back in May, I wrote a blog on whether financial professionals should know how to code in Python. See <http://www.thinktenty20.com/index.php/blog/478-should-financial-professionals-know-how-to-program-or-data-analytics-accountants-should-understand-them-and-have-toolsets-to-perform-them> for a refresher. I mentioned the use of Jupyter Notebook as a means of storing and conveying the code and documentation and facilitating writing, testing and executing the code.

So what does Python have to do with RPA?

With RPA, I have tools to automate tasks. Python, too.

With RPA, I have the means to get information from Excel, PDFs and other external sources and work with the data automatically. Python, too.

The use of UiPath Studio for “smaller” purposes is free. The use of Python is essentially free. Python has tons of “libraries” that add additional functionality to work with just about anything. RPA tools are gaining more and more libraries, and often permit the invoking of code just-in-case.

So, what can RPA solutions do that Python can't?

- Provide a limited/no-code environment in which to operate, particularly focused on screen scraping.
- Integrate with larger suites for collecting business requirements, moving to the field and managing
- Minimize programming errors with components tuned for purpose

What can Python do that RPA can't?

- There are few limitations to Python; there's even an RPA library for Python (imaginatively named RPA for Python or RPA-Python) which simplifies website automation, OCR, and interaction with people on the keyboard and mouse. But,
- Python is a general purpose tool, so you aren't starting off with a user-friendly user interface to get the work done.

With UiPath being available for free for smaller uses, it is up to you whether to begin implementing automation within your organization with Python or with UiPath.