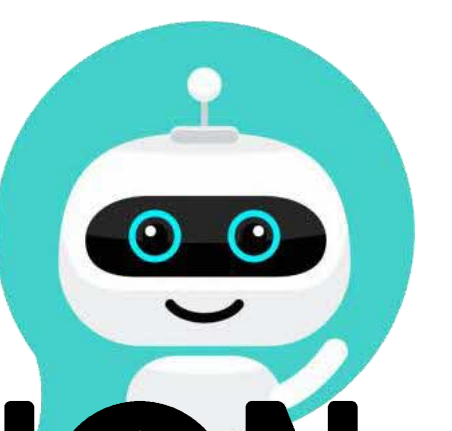




Singapore Healthcare Management 2021

THE USE OF ROBOTIC PROCESS AUTOMATION TO TRANSCRIBE PDF TELECOMMUNICATION BILLS INTO EXCEL



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Sample telco bill ▼

Account No. 11001010 Date 09 Jun 2021
Name SINGAPORE GENERAL HOSPITAL PTE LTD

| TELEPHONE NO. | Number | Cost Centre | Department | Amount (SGD) |
|---|--------------|-------------|-------------|--------------|
| 6611 1111 | 71101 - ENT | | | 3.77 |
| G Local Call Charge 01 May 2021 to 03 Jun 2021 472 Unit(s) | | | | 3.77 |
| Total for 6611 1111 | | | | 3.77 |
| 6611 1112 | 72202 - OTO | IO | GZMOHXVU001 | 0.02 |
| G Local Call Charge 20 May 2021 to 27 May 2021 3 Unit(s) | | | | 0.02 |
| Total for 6611 1112 | | | | 0.02 |
| 6611 1113 | 73303 - REN | | | 22.82 |
| G Local Call Charge 06 May 2021 to 03 Jun 2021 2852 Unit(s) | | | | 22.82 |
| STD Call Date Time Country Called No. Duration Rate Amount 20 May 8:58am Malaysia 0374111113 1m 00s S 0.14 Subtotal for STD 020 Call 0.14 Total for STD Call 0.14 | | | | 0.14 |
| Total for 6611 1113 | | | | 22.96 |
| 6611 1115 | 75505 - PHAR | | | 13.15 - |
| G Disconnect of Telephone Line @ 12% 01 May 2021 to 03 Jun 2021 | | | | 13.15 - |
| Total for 6611 1115 | | | | 13.15 - |

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1. INTRODUCTION

Every month, SGH receives 18 to 20 telecommunication bills in PDF format (left) from our service providers.

A staff identifies specific information in each line item in each bill, types in these information into a corresponding row in MS Excel (below), and uploads the completed Excel files onto a Finance system for billing. This process typically takes 4 hours and is tedious, repetitive and prone to error.

Sample output Excel ▼

| | A | B | C | D | E | F | G | H |
|---|------------|------------|---------------|-------------|-------------|----------|----------|------------|
| 1 | GL Account | Net Amount | Credit/ Debit | Cost Centre | IO | Tax Code | Number | Department |
| 2 | 55000010 | 3.77 | D | 71101 | | I7 | 66111111 | ENT |
| 3 | 55000010 | 0.02 | D | 72202 | GZMOHXVU001 | I7 | 66111112 | OTO |
| 4 | 55000010 | 22.82 | D | 73303 | | I7 | 66111113 | REN |
| 5 | 55000010 | 0.14 | D | 73303 | | I0 | 66111113 | REN |
| 6 | 55000010 | 13.15 | C | 75505 | | I7 | 66111115 | PHAR |

The objective of this project is to automate this process using Robotic Process Automation (RPA), so as to free-up humans to perform higher-value work, and to improve accuracy and productivity.

2. METHODOLOGY

Process Mapping

A team comprising of the process owner from Call Centre and an RPA developer from the AI & Analytics team was formed.

The team mapped out the workflow in detail, and adjusted it whenever necessary.

Script Development

Using UiPath software, the RPA developer programmed an RPA bot using 3 sets of bills from Aug to Oct 2020 as samples.

The RPA bot was then tested if it was working correctly using bills from Jan to Dec 2020.

Implementation

The automation went live in March 2021, allowing the process owner to shorten the turnaround time from half a day to one minute.

The RPA bot also performed the task with 100% accuracy.

User Acceptance Test (UAT)

Next, the RPA developer arranged for the process owner to do an UAT, where the RPA bot was tested whether it could carry out the required tasks and respond adequately to all real-life situations.

3. PROCESS FLOW

BEFORE

Staff logs in to the telco's portal.

AFTER

Staff exports all the bills for the previous month.

4 hrs

Staff identifies specific information from each line item in each bill and fills up the Excel templates accordingly.

Staff executes the automation.

The RPA bot 'looks through' each line item and fills up the Excel template accordingly.

1 min
(99.6% time savings & 100% accuracy!)

Staff uploads the Excel files onto a finance system for billing.

4. CONCLUSION

RPA can augment our workforce by taking over repetitive and straightforward tasks. RPA can also complete tasks with higher accuracy and within a much shorter period of time.

With this successful use case, SGH will continue to roll-out the use of RPA across the entire institution.

