

Real Time Internationalization and Information Dissemination for Object Identification using Image Processing Algorithms

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Abstract: As more corporate users are moving from one country to the other it's difficult for them to keep learning new languages as the duration of stay by corporate businessman's is less but it's important that when they arrive at any country for work they should be able to get their daily necessities and other shopping items in local languages. Here, there is a catch that they cannot speak the local language to get the product. In this research we will be addressing this issues by giving them a tool which will identify the object in real time and internationalization the information for them by this process and using the tools provided they can get what they want in limited time frame which they stay in international countries. This research will help solve the problem of purchase of products from international market without knowing the local language of the country the solution will identify the objects in real time and then internationalize the information about the product which the customer wants to purchase also voice over will be added, so that, the object which is identified will be pronounced in the local language where the sale person will understand what the customer wants.

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INTRODUCTION

As customer moving from different countries require different data and information about the products it's important to internationalize the information for products to be purchase by the customers. This research work focuses on information internationalization where any object or product which is identified will be captured and presented to the customer and the sales person in internationalized way, so that, the seller and the buyer can purchase and sell the products in local languages. In this research work following literature review has been carried out. In the first reference, the researcher focuses on how

virtual businesses are growing day by day and it's important that we should be able to internationalize information in this globalization era. Trade between organizations can only be done when businesses in different countries and different locations collaborate and exchange information and understand the business needs in the local language they understand thus the purchase orders and team collaboration can be done in an internationalized way. The researcher focuses on the methods and ways in which internationalization can be achieved and businesses can collaborate for productive future prospects^[1,2]. In the second research article, the researcher focuses on how internationalization of

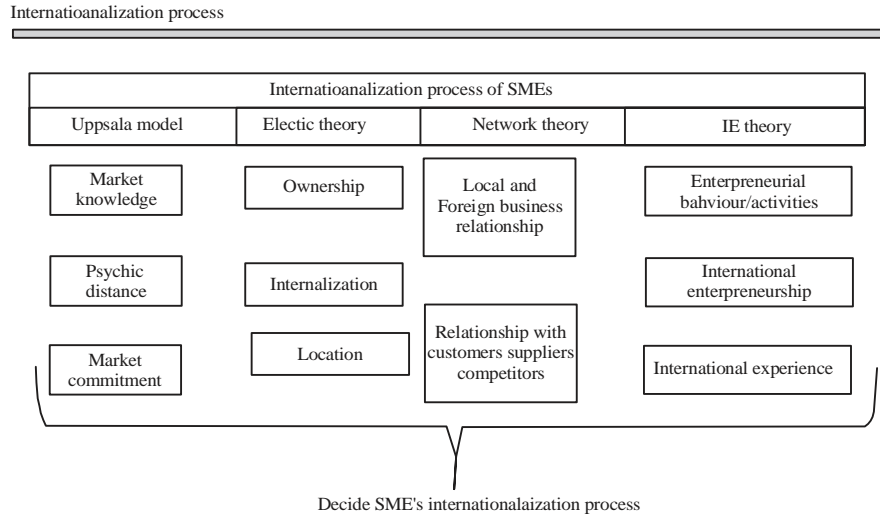


Fig. 1: Internationalization process model



Fig. 2: Small and medium business product internationalization

information plays a vital role in teaching and learning and how courses can be internationalized, so that, students can get maximum gain from available teaching material from different countries and read and used it in their local languages^[2, 3]. Text data and video material online for teaching and learning can be internationalized in different languages focusing on student's perspective for understanding the teaching and learning material. Students can also submit assignments and exercise material online and the data is translated to an international format where the faculty or doctor in charge can evaluate the students work and assign him marks based on these assignments completed. In third research work carried out by the author who focuses on how exporting and importing educational services will help build knowledge of students and faculty members by utilizing information internationalization^[3, 4]. As knowledge and economy go hand in hand it's important that the knowledge consumers and producers are not left behind by the technological setback. Knowledge

producers should be given all the tools required, so that, they produce better results and better contents which can be internationalized and be used worldwide without any limitation of access^[5] (Fig. 1 and 2).

MATERIALS AND METHODS

Research objective: The object of this research work is to gain better knowledge and understanding of internationalization process which is followed in the small and medium scale industries and to help internationalize information in real time, so that, different stakeholder don't have to find out ways or need support for translation of information, so that, the purchase of the products can be done without worrying about how to purchase any product in the local market when they are out for shopping in a country which they are non-resident^[6-8] (Fig. 2). In this research work following research methodology will be used:

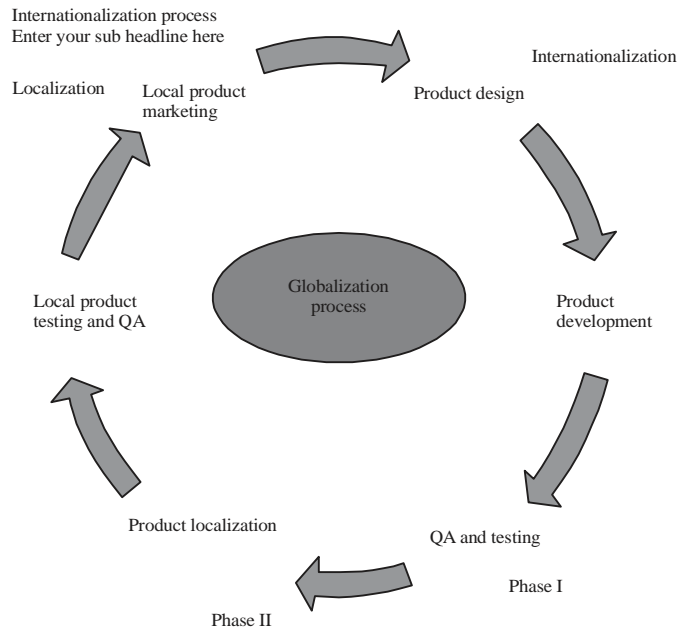


Fig. 3: Internationalization phases and processes

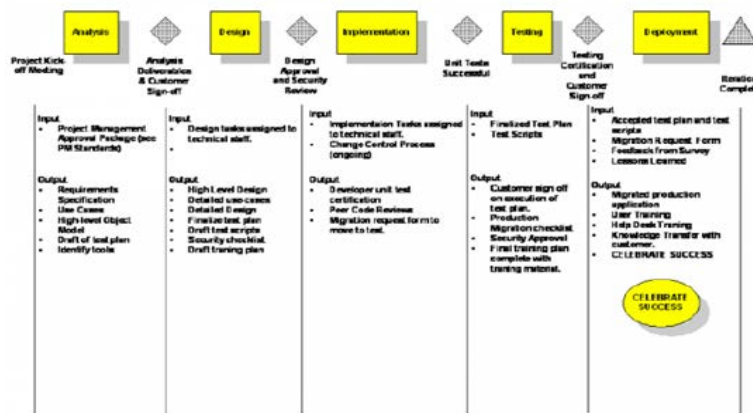


Fig. 4: Methodology for research implementation

- Qualitative and quantitative analysis methods will be applied in this research work
- Data mining and data warehousing for internationalization of information will be performed^[9]
- Data collocation and data semantics will be done so that, information can be internationalized on the fly in any given time to the end users
- Data mitigation and data migration engine will be set up for the transformation of information from one form to the other
- MOOCS data will be internationalized and given to end users on demand

- Small and medium scale industries data internationalization will be carried out on demand using web services deployments^[10] (Fig. 3 and 4)

Project management plan: This research work will have the following management plan as software engineering has different models for designing the solutions we will follow requirements gathering and requirement capturing process to collect stakeholder’s information. Specification analysis for the research work will be done and specification document for the research will be created^[11, 12]. The design activity will involve different stakeholder who possesses knowledge of

internationalization processes^[14]. The deployment phase will have all the key components which are designed in the design process with the business logic to work in synchronization so that the target applications work for internationalization. The server will hold the deployment code modules and services^[14-16].

Testing of the applications and the services which will be designed will be carried out and the virtualizations servers which will act as testbeds and testing servers. The last and the final stage in the project will be production server which will hold the codes and the services which will be running online on the production servers and maintenance will be carried out remotely on virtualization servers running VM's^[17, 18].

Projected outcomes and their application: The results of this research work include the following. Internationalization of information and dissemination of information to small and medium scale businesses. Internationalization and information dissemination for the educational sector where the courses will be internationalized and the MOOCs contents will be available to the end users^[19, 20]. Semantical data can be used for analysis of topics for internationalization in small and medium scale industrial meetings^[21, 22].

RESULTS AND DISCUSSION

Methodology for results implementation: This research work will be implemented using following methodology:

- Requirement analysis
- Requirement gathering
- Requirement capturing
- Designing solution for internationalization of information and dissemination^[23]
- Designing web-services for internationalization of information and dissemination
- Integrating web-services with web applications
- Deployment of web-services on virtualization technology environment and testbed design for deployment process
- Deployment of web applications and integration with web-services on virtualization technology environment and test bed design for deployment process^[24]
- Maintaining and running web-services on testbed and production servers
- Configuring on the fly internationalization of information and dissemination^[8, 10]

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REFERENCES

01. Lu, W. and I. Al-hakim, 2009. Collaboration in the era of internationalization: A Chinese case. Proceedings of the 2009 4th International Conference on Cooperation and Promotion of Information Resources in Science and Technology, November 21-23, 2009, IEEE, Beijing, China, pp: 339-343.
02. Alcacer, J., J. Cantwell and L. Piscitello, 2016. Internationalization in the information age: A new era for places, firms and international business networks?. *J. Int. Bus. Stud.*, 47: 499-512.
03. Cachin, C., 1998. An information-theoretic model for steganography. Proceedings of the International Workshop on Information Hiding (IH'98), April 14-17, 1998, Springer, Berlin, Germany, pp: 306-318.
04. Ifinedo, P., 2011. Internet/E-business technologies acceptance in Canada's SMEs: An exploratory investigation. *Internet Res.*, 21: 255-281.
05. Ghobakhloo, M., T.S. Hong, M.S. Sabouri and N. Zulkifli, 2012. Strategies for successful information technology adoption in small and medium-sized enterprises. *Inf.*, 3: 36-67.
06. Jahanshahi, A.A., S.X. Zhang and A. Brem, 2013. E-commerce for SMEs: Empirical insights from three countries. *J. Small Bus. Enterp. Dev.*, 20: 849-865.
07. Ghobakhloo, M., M.S. Sabouri, T.S. Hong and N. Zulkifli, 2011. Information technology adoption in small and medium-sized enterprises: An appraisal of two decades literature. *Interdiscip. J. Res. Bus.*, 1: 53-80.
08. Bi, R., R.M. Davison and K.X. Smyrniotis, 2014. E-business use and value for fast-growth small-to-medium enterprises in turbulent environments. Proceedings of the 18th Pacific Asia Conference on Information Systems, (PACIS'14), June 24-28, 2014, Chengdu, China, pp: 1-16.
09. Hashim, N.A., 2011. E-commerce and government policy initiatives for Malaysian SMEs: The need for assessment. *Sci. Publ. Policy*, 38: 807-816.
10. Kuivalainen, O. and S. Saarenketo, 2012. International Pathways of Software Born Globals. In: Handbook of Research on Born Globals, Gabrielsson, M. and M.V.H. Kirpalani (Eds.). Edward Elgar Publishing, Cheltenham, UK., ISBN: 978-1-84844-953-4, pp: 263-284.

11. Raymond, L. and J. St-Pierre, 2013. Strategic capability configurations for the internationalization of SMEs: A study in equifinality. *Int. Small Bus. J.*, 31: 82-102.
12. Liu, G., R. Shah and E. Babakus, 2012. When to mass customize: The impact of environmental uncertainty. *Decis. Sci.*, 43: 851-887.
13. Spowart, M. and R. Wickramasekera, 2012. Explaining internationalisation of small to medium sized enterprises within the Queensland food and beverage industry. *Int. J. Bus. Manage.*, 7: 68-80.
14. Brannick, M.T., D. Chan, J.M. Conway, C.E. Lance and P.E. Spector, 2010. What is method variance and how can we cope with it? A panel discussion. *Organizational Res. Methods*, 13: 407-420.
15. Alario-Hoyos, C., I. Estevez-Ayres, C.D. Kloos and J. Villena-Roman, 2017. From MOOCs to SPOCs... and from SPOCs to flipped classroom. *Proceedings of the European Conference on Technology Enhanced Learning (EC-TEL'17)*, September 12-15, 2017, Springer, Berlin, Germany, pp: 347-354.
16. Waks, L.J., 2016. MOOCs and Career Qualifications. In: *The Evolution and Evaluation of Massive Open Online Courses*, Waks, L.J. (Ed.). Palgrave Pivot, New York, USA., ISBN: 978-1-137-48594-6, pp: 83-101.
17. McCowan, T., 2017. Higher education, unbundling and the end of the university as we know it. *Oxford Rev. Educ.*, 43: 733-748.
18. Pickard, L., 2017. Don't Pay for your MBA: The Faster, Cheaper, Better Way to Get the Business Education you Need. Amacom, New York, USA., ISBN: 9780814438497, Pages: 240.
19. Onah, D.F., J. Sinclair and R. Boyatt, 2014. Dropout rates of massive open online courses: Behavioural patterns. *Proceedings of the 6th International Conference on Education and New Learning Technologies (EDULEARN'2014)*, July 2014, Barcelona, Spain, pp: 5825-5834.
20. Hernandez, R. and H. Amado-Salvatierra, 2018. Towards Full Engagement for Open Online Education: A Practical Experience from Micro Masters at edX. In: *Software Data Engineering for Network E-Learning Environments*, Caballe, S. and J. Conesa (Eds.). Springer, Berlin, Germany, ISBN: 9783319683171, pp: 161-177.
21. Sathyanarayana, S.V. and K.N. Bhat, 2012. Novel scheme for storage and transmission of medical images with patient information using elliptic curve based image encryption schemes with lsb based steganographic technique. *J. Med. Imaging Health Inf.*, 2: 15-24.
22. Chanu, Y.J., K.M. Singh and T. Tuithung, 2012. Image steganography and steganalysis: A survey. *Int. J. Comput. Appl.*, Vol. 52, No. 2. 10.5120/8171-1484
23. Por, L.Y. and B. Delina, 2008. Information hiding: A new approach in text steganography. *Proceedings of the 7th WSEAS International Conference on Applied Computer & Applied Computational Science (Acacos'08)*, April 6-8, 2008, Hangzhou, China, pp: 689-695.
24. Nayak, J., P.S. Bhat, U.R. Acharya and M.S. Kumar, 2009. Efficient storage and transmission of digital fundus images with patient information using reversible watermarking technique and error control codes. *J. Med. Syst.*, 33: 163-171.