

## **Automatic Identification of Spoken Names and Addresses**

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Providing names and addresses is an important part of many telephone interactions. But giving a name and address to a human operator can be slow and difficult, and the resulting transcription often contains errors. This problem tends to be particularly serious with call-centre staff in geographically remote countries, such as India, who are being increasingly employed because of the lower wage costs. It has generally been considered too difficult for machines to transcribe names and addresses automatically. Indeed, some simple call-centre interactions, which could otherwise be automated, are handled by human operators purely because of the need to take down a name and address. This paper shows that, provided a comprehensive list of names and addresses is available, covering, for example, the whole country or all the customers of an organisation, a spoken name and address can be identified automatically. It can be done faster, more accurately and more conveniently for the caller by machine than by human operator. Once automatic name-and-address identification becomes widespread, we can expect such information to replace the many obscure account numbers that we currently have to struggle to remember and provide for the convenience of various administrative systems but to our own considerable inconvenience.

The paper goes on to examine the special cases of the UK and Canada, where high precision alphanumeric postal codes make it unnecessary to provide the full address. It discusses the use of confidence measures to detect cases where the database contains an error or the name and address has been spoken incorrectly. Finally, it points out that the identification of names and addresses is just one example of a broader class of potential applications of speech recognition where traditional methods using finite-state grammars are impractical but which can be tackled by the methods used for names and addresses.