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PIPAT TONGSRI: AN EXPERT SYSTEM FOR THAI FISH CLASSIFICATION TO THE FAMILY LEVEL. THESIS ADVISORS: PIROJANA SUWANSUTHI, M. Eng., PRACHIT WONGRAT, Ph.D., SOMMAI JANEKITKARN, M.Sc. 136 p. ISBN 974-663-695-2

The Expert System for Thai Fish Classification was developed with Microsoft Visual Basic version 5.0. It is designed to work on a personal computer, with Microsoft Windows 95 or higher grade of operating system. Its purpose is to identify fish found in Thailand to the family level. Production rules, which form condition-action pairs, were used as knowledge representation. Microsoft Access 7 was used for manage data supporting the system. User interface was designed with pictures to reduce errors in input data and for clearer communication between user and system.

The system was design with three parts. The first was "Identification", which used more than 220 rules and more than 400 picture to identify 3 classes, 3 subclasses, 35 orders, 48 suborder and 167 families of fish found in Thailand. The second was "Handbook", which supports information about fish classification, such as information of fish according to class, subclass, order, suborder, family level and English common name, fish classification schema, morphology of fish and a glossary of technical terms used in fish classification. The last part was "About", which displays information about the system, bibliography and author.

The system was validated by experts in the Faculty of Fisheries, Kasetsart University during a 1 mouth trial. The results of this research was development of an Expert System whose concepts and ideas can be expanded to solve similar problems.