The use of trademarks under either the US or EU model suggests a high level of organization:

> In particular, the necessary registration of a collective mark, as well as the management of a trademark once obtained, involves financial investment that may constitute an obstacle for indigenous peoples. In addition, the success of a trademark also depends on knowledge about the best marketing strategies, including the establishment and control of distribution channels and the devise of proper public relation measures.[151]

As with GI protection, trademarks do not emerge as a powerful tool to protect TM. There must be a registration system that would act as a primary barrier. Perhaps more significant is that a trademark is useful when products are brought to market. This implies a level of complexity that few indigenous groups possess. In contrast, a patent could be owned by a group that may be unable to market a product. In sum, trademark protection appears to be useful only in limited circumstances, such as might be the case for some Chinese TM.

X. *TRADE SECRET PROTECTION*

Indigenous communities may lack the resources to successfully bring a patent application to fruition. The process is far from a simple administrative procedure; it requires access to legal resources to prepare the application. As well as costs for the application itself, there are legal issues that can arise after the grant. There can be opposition to granting the patent as well as litigation over infringement. It is also clear that with much TK, there is difficulty in determining the inventor. Other groups may possess similar information, which would make the application by one group potentially unfair. A group may not want to share their information. After the expiry of a term of protection under a patent, the information becomes public.[152]
Because of these considerations, some have suggested that trade secret laws could be used to supplement or even supplant patent protection of TK:

> While there is excessive attention being placed on patents and their restrictive nature against the protection of traditional knowledge, trade secrets have not been adequately exploited by national institutions and local peoples to protect the knowledge. It is however known that traditional peoples have used – and possibly continue to use – trade secrets to protect their knowledge. However, this form of protection of traditional knowledge is generally not institutionalised: institutions to safeguard trade secrets of indigenous and local peoples are either weak or absent in most countries.[153]

According to the author above it is essential that national governments enact laws that allow trade secret law to apply to TK. Yet to date there is little consensus – unlike the

151 Silke von Lewinski, *Symposium Traditional Knowledge, Intellectual Property, and Indigenous Culture Articles*, 11 CARDOZO J. INT'L & COMP. L. 764 (2003).
152 *See* Stevenson, *supra* note 63 at 1152.
153 Mugabe, *Intellectual Property Protection and Traditional Knowledge*, paper prepared for WIPO, (December 1998), accessible via the homepage of the African Centre for Technology Studies *available at* http://www.acts.or.ke (last visited Sept. 5, 2006).

case for patents – regarding how trade secrets should be protected on an international level. It was only when TRIPS came into effect in 1994 that trade secrets were recognized in international agreements.[154] Until 1996, the US did not have a federal trade secret law. In 1996 the Economic Espionage Act passed, which gives a federal criminal remedy for the misappropriation of trade secrets.[155]

There are three basic requirements for trade secret protection which sets a high hurdle for TK and TM to pass. The first requirement is that the information must be a secret, the second is that it have commercial value because it is secret, and the third is that reasonable efforts were made to keep the information secret. The scope of the protected information can be broad. The courts will place particular emphasis on the conduct of the parties rather than on the subject matter.[156] The main positive feature is that protection does not require any government involvement or registration. Particularly in the case of TK, which is known to a small group of people, the definition of secrecy is of critical importance. Secrecy does not have to be absolute. It is possible to disclose the information on a 'need to know' basis as well as under a confidentiality agreement.[157] This, however, appears to be a situation more suited to a controlled business environment rather than one involving TK.

While at first trade secret protection would appear to be ideal, there are several significant problems. A large amount of TK could be appreciated as being in the public domain. Western research, as well as disclosure to other groups, quickly run afoul of the first requirement. Reasonable steps to protect secrecy, the second criteria, would be difficult to demonstrate in most cases. Without reasonable proof that efforts were made to maintain secrecy, it is unlikely a court would recognize a trade secret.[158] As noted before, there are few nations that have a well developed legal structure to protect this kind of information. When TK is considered, this situation is even more unclear. Perhaps even more significant, trade secret protection is generally considered weaker than patent protection. It does not protect against reverse engineering or independent development.[159] According to the Uniform Trade Secret Act, the acquisition of the known product must be by honest means if reverse engineering is to be considered lawful.[160]

On another level, the reason why trade secret protection is not usually encouraged is that it can stifle the flow of information.[161] However, it can offer complete control of the information for a long period of time. Particularly for pharmaceuticals, a moral argument could be made that information with the potential to help the public should

154 *See* Stevenson, *supra* note 63 at 1153.

155 The Economic Espionage Act 1996 18 U.S.C. §§ 1831-1839. A detailed discussion of the Act is available at http://cybercrime.gov/ipmanual/08ipma.htm#VIII.B.2.c (last visited Sept. 5, 2006). According to 18 U.S.C. § 1832 the Act applies to trade secrets that are related to or included in a product that is produced for or placed in interstate or foreign commerce.

156 *See* DONALD S. CHISUM & MICHAEL A. JACOBS, UNDERSTANDING INTELLECTUAL PROPERTY LAW § 3C (1992).

157 *See* Michael J. Hutter, *Protecting Trade Secrets: Legal Theories*, *in* PROTECTING TRADE SECRETS 1989, at 9,15 n43 (1986).

158 *See* Jacoby and Weiss, *supra* note 10, at 101.

159 *See* CHISUM & JACOBS, *supra* note 156.

160 Unif. Trade Secret Act cmnt. to § 1 (amended 1985), 14 U.L.A. 438.

161 *See* Jacoby and Weiss, *supra* note 10, at 101.