Recipe for Disaster

With the announcement of another export quota, maddog laments the unreadiness of nations who allow themselves to fall prey to national monopolies. *By Jon "maddog" Hall*

Today in the newspaper I read that China was considering limiting the amount of rare earth it exports to other countries. Since China produces about 97 percent of all the rare earth metals used in electronics, such as integrated circuits, LCD TVs, and other high-tech components, this limit would do two things: raise prices on all these components and force companies to build more electronics factories in China to skirt the limit on raw materials.

Although these rare earth elements exist in other countries, for a long time it has been cheaper to get them from China, so potential rare earth supplies in other countries were not developed. Because rare earths are used in relatively small quantities to build relatively high-value goods, their shipping costs were negligible. Now that the prices of these rare earth materials are rising, other sources outside China are being developed, but they will not be ready until 2015.

I do not blame China either for limiting its production of these rare earth metals to get more money or for wanting to draw more high-tech companies to China to manufacture products from these materials. I do blame the countries that allow local raw materials critical to their existence (both economic and physical) to be neglected and unable to be produced in a timely manner for industries that need the materials, particularly when these sources could effectively offset the ability of one country to hold other countries hostage.

Likewise, when I go to a country like Brazil (a country of 192 million people) and talk to the local computer manufacturers about designing and making motherboards, they tell me it is "cheaper and faster" just to go to Taiwan and buy the motherboards there. When I point out that import duties often more than double the cost of these boards, they just shrug and pass the duty costs (which would not be paid on Brazilian-manufactured goods) on to the consumer. This raises the prices for the goods to almost double what is paid outside Brazil, which in turn leads to many products being "hand carried" across the border by people traveling to Brazil. It also means design and manufacturing jobs that could be created in Brazil go to other countries.

I understand that some countries are so small or resource-poor they cannot supply the resources they need for existence. These countries, by definition, are dependent on others. However, many countries do possess and could supply these materials, thereby reducing their dependency on resources outside their domain.

Additionally, a country should develop a skilled workforce that not only can create new products but can repair the items necessary to keep the country strong. To keep deferring these skills to some other country, no matter how benign they currently might be, is a recipe for disaster.

Some people might argue "economies of scale" in having one country design and manufacture the needs of other nations; however, in a lot of circles, one country designing and distributing a product is as much a monopoly as one company designing and distributing a product.

Software is one of these resources. Software is no longer a luxury that can be foregone if it is cut off for some reason, such as embargo, war, legislation, or simply corporate insufficiency or failure. We can no longer run our countries using hand calculators and slide rules.

With Free Software, a country of almost any size can develop the skills within their borders to repair and extend the software necessary to run the country. Designing high-tech hardware, such as motherboards and cellular telephones, builds knowledge and skills within the country that could be applied to other jobs. Because these skills are needed to design complex hardware, "brain drain" – highly skilled people leaving for other countries to find challenging work – is also minimized.

Free Software also allows countries to jump-start industries because the countries won't have to start from scratch writing their own software and systems. Students who are learning how software works can examine and modify the software that is being used in Open Source products.

As I continue to travel to countries to "beat the Free Software drum," I suppose I should no longer be amazed by people, both in industry and government, who stick their heads in the sand. ■■■