

October 29, 2008

## A Real Chance to Create Equitable Global Prosperity

### Abstract

The Open Channels Project (OCP) can make the world economy more equitable, efficient and flexible than it is today by redefining and reducing the role of middlemen. By doing this, it can increase prosperity, per-capita productivity and political stability across the globe. The economic world not only wants this result, it is also within our grasp and urgently needed.

Open channels, as OCP conceives them, first take advantage of existing technologies and concepts used in new ways. Second, the underlying thrust of the project lays the groundwork to make a whole new economic model possible and popular around the world. OCP wants to apply the precise leverage needed to start that landslide. OCP has the ideas and technical means for this purpose — all that's needed are the societal structures within which to put them into action.

The world currently faces not only a series of global crises, but also a once-in-a-lifetime opportunity. If we as a global culture fail to act, this chance to lay a better foundation for the future will be lost or diluted by parochial self-interest and short-sighted regional politics. The time to lay that better foundation is now.

A new model for commerce is already evolving. With the right boost, it can change the rules of the game and provide the basis for a more stable world economy. As with many commercial advances in the past, the new model is being driven by improvements in information exchange — in this case, the Internet. OCP brings together a variety of established ideas, including microfinance practices and inexpensive Internet computers (*e.g.* the XO (<http://laptop.org>) or Intel's Classmate PC). In addition, it deploys and uses a new, public, high-security, rules-based software layer on the Internet.

All the technology needed to accelerate the development and adoption of this new model already exists. However, it needs to be assembled and deployed in the form of an open infrastructure, like public highways or the Internet itself. No corporation or government can accomplish that task on its own — instead, a cooperative global initiative is required.

The Open Channels Project dedicates itself to kick-starting, guiding and managing that initiative to produce as efficient, fair and open a system as possible, and to make the inevitable shift happen quickly, as we believe the world needs. In the same way physical highways are administered as public works, OCP believes that digital trade routes must also be maintained to provide safe, fair and equal access to everyone, to the benefit of people everywhere.

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## 1. Introduction

The great promise of globalization to align the interests of peoples everywhere, and of free markets to increase prosperity for everyone, has foundered on inefficiencies in the conventional commercial model. Real markets are still far from free. Those who mediate trade channels exercise a disproportionate control over what is bought and sold, and retain a disproportionate share of resulting revenue. Instead of increasing world prosperity, trade of this sort has often proved exploitative. It has tended to expand the gap between rich and poor in many places, and it has often created the kinds of interdependencies between nations that reduce rather than increase the overall stability. In this context, the current world financial crisis is a wake-up call. It's becoming clear that our social fabric is in danger.

Many of these problems are rooted in the logic of the classic commercial model. This business model is so pervasive that people usually assume it's inevitable. In fact, it is imposed by logistical constraints that have already begun to change.

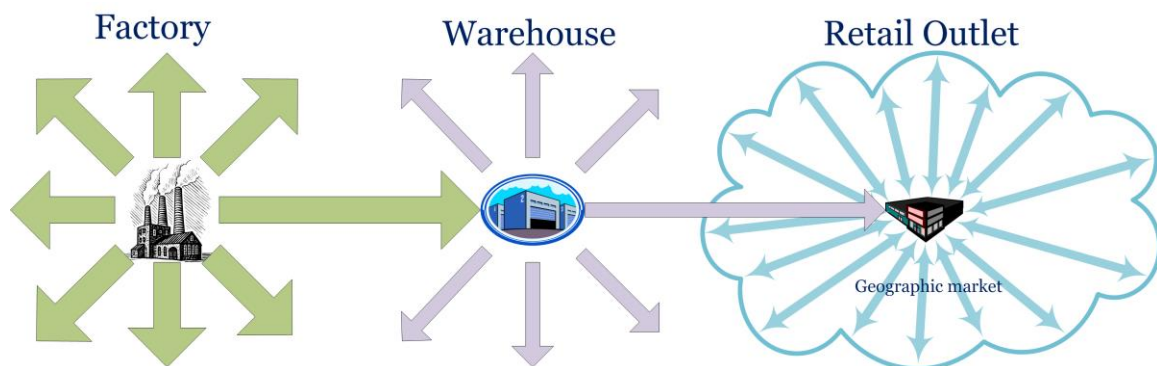
To understand more clearly how this classic commercial model can be replaced and to see the implications of the new model, we review the logic of the classical model below.

## 2. Commerce in the Classic Model

Since human trade began, it has been organized around three stages: *production*, *distribution*, and *sales*.

Goods are produced in one place and transported to another place where they are sold. At a simple village level, crops are harvested in the fields, hauled on carts to a produce stand and bought there by the people of the village.

Markets in this model are generally defined geographically. Manufactured goods fan out from factories to retail outlets that serve specific geographic neighborhoods — the market that an individual store serves consists of those people who can conveniently reach it.



This model imposes objectives on its participants that can be summarized as follows:

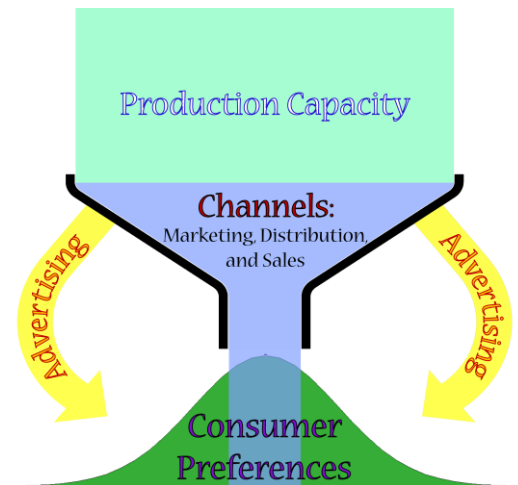
- Producers** Create a product portfolio that maximizes return on investment at an acceptable level of risk:
- ☆ Identify optimal product feature sets, taking into account factors affecting cost, price and sales volume. These factors include customer preferences, economies of scale, competition, and similar concerns. This analysis generally favors high-volume products with mass appeal.
  - ☆ Reduce risk by advertising to generate and focus demand, by branding to set customer expectations about product quality and by limiting competition.
- Retailers** Stock and price the products sold so as to maximize return on investment at an acceptable level of risk:
- ☆ Choose the product mix that results in highest profits at a predictable rate of sale.
  - ☆ Minimize factors that increase risk, including long lead times, high inventory costs, short shelf lives and a lack of liquidation or cost-recovery options.
  - ☆ Maximize factors that limit risk, including sharing inventory costs with producers, targeting areas where there are stable levels of demand, limiting competition where possible, building customer loyalty through shopping convenience and reputation for low cost, and other approaches.
- Consumers** Use minimum effort to acquire goods that maximize satisfaction at the lowest possible cost and an acceptable level of risk:
- ☆ Go to nearby stores where you are likely to find what you want.
  - ☆ Limit risk by buying items whose value you think you understand (often because of advertising) and whose quality you trust (often because of branding).
  - ☆ Maximize value through various forms of comparative shopping.

Note that retail establishments generally have high fixed costs, and their survival depends on moving a lot of inventory through a store reliably. Retailers constantly have to place risky bets on what will sell. Items that sit on the shelf very long drag down profits. The logic that constrains what an individual store can profitably stock also limits what is available to customers.

Within the constraints of this logic, very sophisticated efficiencies continue to be achieved. Wal-Mart spends large amounts of money creating and refining programs that manage the shipping and distribution of its inventory, letting it stock stores less expensively than anyone else. Similarly, in the online marketplace, Jeff Bezos has said Amazon's predictive warehousing system is one of the company's principal competitive advantages, letting Amazon deliver products at a lower cost than competitors. Companies like Costco are finding ways to offer consumers lower prices by combining distribution with retailing.

Such efficiencies support the centralization of the system, making barriers to entry increasingly formidable — independent shopkeepers have a harder and harder time competing with the bigger chains.

This classical commercial model has dominated economies across the globe for centuries. It has been refined by industrialization to favor generic, one-type-fits-all products that can be manufactured and sold in huge quantities. Economies of scale dominate competition at all stages. The system can be understood as a kind of funnel.



In effect, production is focused to target the middle of the bell curve of customer needs and wants.

Advertising is essential to success in creating predictable levels of demand and reducing retailer risk. Competition between similar products is generally won by clever advertising and branding, and often by some measure of monopolistic advantage.

Whenever consumers perceive competing products as interchangeable, on the other hand, price becomes the dominant purchasing criterion, resulting in lower profit margins.

Although refinement of this model has lowered prices and increased reliable access to some goods, the model's core logic hasn't changed since trade began. An old, still useful rule of thumb says the retail price of a product has to be at least five times what it costs to manufacture. This reflects the costs of production, distribution and retail sales in roughly the following proportions.

Components of Retail Price (Classical Commercial Model)					
Manufacturing		Distribution		Retail Sales	
Price (30%)		Mark-up (20%)		Mark-up (50%)	
Costs (20%)	Margin (10%)	Costs (14%)	Margin (6%)	Costs (32%)	Margin (18%)

In other words, channel costs make up about 80 percent of the sales price of most items.

At the same time, the consumer demand at the edges of the bell curve is very difficult to satisfy in the classical model. What is known as "the long tail" of the curve has traditionally been largely ignored.

### 3. Recent Shifts

Already, the Internet has begun to change the logic of trade. Consider the current giants of Internet commerce, namely eBay, Amazon and Google:

- ❑ eBay has taken the most local of retail outlets, the garage sale, and turned it into a national and even international market.
- ❑ Amazon has begun to create a trusted online retail mall, where you can get anything you can find in bricks-and-mortar malls at prices that are generally lower, and at a higher level of convenience (provided you can wait a few days for delivery).
- ❑ Google's business model has been, in effect, the online equivalent of the Yellow Pages. The success of its search engine has made it the dominant market aggregator for all Internet commerce — when you want to buy something, the first thing you do is google

it, in what is known as a *pull* model for product discovery.

At the same time, this dominance has allowed Google to generate huge profits selling *push* advertising of more or less traditional kinds. As with the older phone books, this kind of hybrid pull/push synthesis is rooted in information technology.

The characteristics of Internet commerce that change the rules are:

- ❑ Very low cost of information exchange.
- ❑ Easy and powerful means of discovery.
- ❑ Very low barriers to entry in creating a sales channel.
- ❑ Virtually no incremental cost to ship digital products.

Although these novel characteristics have made big changes possible already, it's interesting how much of Internet commerce is still rooted in the bricks-and-mortar organizations of the past.

Publishing is one example. Costs of production traditionally have involved both the royalties paid to content creators and the cost of physical media (books, records, CDs, or whatever). Marketing and distribution have traditionally been difficult and expensive, and product selection has always been risky. This framework has historically created a buyer's market in which the content creators have been paid in a range from 1 to 5 percent of retail prices. Publishing companies have been able to justify this based on the high risks of their investment.

Now consider the new world of the Apple iPod and the Amazon Kindle. These devices let you buy and consume digital content without any intermediate physical object. Costs of manufacturing and shipping become essentially nil, and the cost of running an online store for such content is far lower than it would be to run an equivalent bricks-and-mortar outlet.

Publishers, however, are continuing to charge very close to the same amount for works in digital form as they do for books or CDs. The price of one song at Apple's iTunes store is \$1, and most publishers sell e-books for only a few dollars less than the printed versions. At the same time, publishers are vocal in their outrage at the ease with which digital content can be pirated. They pour large amounts of money into copy-protection schemes that anyone with a technical background can tell you are doomed to failure, while, consumers feel upset at being asked to pay so much for content that costs publishers so little to produce and distribute, especially since artists make so little.

Aside from corporate resistance to change, other technical and human factors limit adoption of a new commercial model:

- ❑ Security issues on the Internet continue to be highly problematic. Identity theft, scams, viruses, fraud, phishing and obnoxious e-mail spam continue to be serious problems, with no comprehensive solution in sight.
- ❑ Inconvenience: Shopping on the Internet can still be quite inconvenient, requiring setting up new accounts with each vendor, frequent entry of personal information, remembering and typing passwords, and trying to research the reliability of different products and sources. Sites provide little consistency in how they present the products being sold.
- ❑ Cost per transaction is high for vendors: The main payment method on the Internet remains the credit card, with PayPal and similar services coming in a distant second. This keeps the minimum cost per transaction quite high for vendors.
- ❑ Limited offering of low-priced items: A few sites are set up to handle micropayments (purchases of less than \$1 U.S.) backed by a reliable credit-card account, but there is no

safe and easy way to transfer small amounts of money to a wide range of vendors. This greatly limits the offering of low-priced items.

- ❑ **Difficulty in e-commerce setup:** Setting up an e-commerce site is still far from easy. Back ends vary widely in their flexibility, security and ease of use.
- ❑ **Visibility issues for stores:** Getting visibility for your online store becomes increasingly difficult and expensive as more Internet businesses appear. If your site shows up past the fifth page returned by a Google search, how many people are likely to find it?
- ❑ **Difficulty in finding enough product information:** For buyers, it's often hard to find enough information about a product sold online to make an informed purchase decision. At least in a bricks-and-mortar store, you can often ask a salesperson for information or a recommendation.
- ❑ **Fraud and disputes with sellers:** Unless you go through an umbrella organization like Amazon, you have little recourse in cases of fraud or disputes. Even on eBay, people often find themselves on their own when problems arise.
- ❑ **International shipping issues:** International sales are often hampered by primitive and expensive shipping options. The problem's often made worse by complex customs processes and serious trust issues caused by differences in foreign laws.
- ❑ **Lack of fun:** For many people, shopping is a form of entertainment. Online shopping seldom offers as much fun as a good bricks-and-mortar retail complex can.

To address these problems right now is difficult for any individual company or organization. That's particularly true if a company wants to profit from a proprietary solution. At the same time, solving these problems would make online buying and selling much easier, safer, more efficient and more profitable.

## 4. The Open Channels Model

The Open Channels Project proposes a new, open public commerce layer on the Internet, created and managed by a nonprofit international consortium and supported by various governments around the world. OCP's premise is that this new model can take the positive changes already being made through online commerce to their logical conclusion. By doing this, we can change the rules of commercial distribution at a fundamental level, to the benefit of most people in the world.

This change will reduce and alter the role of middlemen in commerce. The implications are truly dramatic. Although it's hard to predict where a standard equilibrium of retail pricing for tangible goods would settle under the new model, we believe the following comparison represents a reasonable approximation.

Components of Retail Price (Classical Commercial Model)					
Manufacturing		Distribution		Retail Sales	
Price (30%)		Mark-up (20%)		Mark-up (50%)	
Costs (20%)	Margin (10%)	Costs (14%)	Margin (6%)	Costs (32%)	Margin (18%)

Retail Price in the Open Channels Model					<del>Savings/Productivity Gain</del>  <b>Prices fall by as much as 40%!</b>
Manufacturing		Shipping	Retail Sales		
Price (50%)		(20%)	Mark-up (30%)		
Costs (33%)	Margin (17%)	Costs (20%)	Costs (10%)	Margin (20%)	

As the chart illustrates, savings and productivity gains in the open channels model could lower prices by around **40** percent.

All the technology needed to make this change possible already exists. It needs to be assembled and adapted to fit the model, but the technical risks of development are very small.

We believe, however, that the features described below must be put in place *together* to create a complete, end-to-end solution. As in any coherent system, half-working is not enough, and 80 percent working is not enough. Even 99 percent working is not really enough. At least a basic version of system must function in its entirety in order for the system to fulfill its promise.

The elements needed to make the new commercial model a global reality follow.

### **A Secure Transaction System**

As a buyer in the open channels model, you plug in your personal key and log on to your commercial account only once every session. OCP conceives of this personal key as a small, secure hardware device that attaches to computers by a USB port or similar. After that, you never have to identify yourself or enter any personal information again. The system knows who you are, but no one you interact with needs to know anything about you. You are now connected to a powerful distributed transaction service that takes care of all payment details.

- ❑ Anonymity is provided: Not only is your financial information unavailable to any vendor you buy from, but if you choose, you can shop completely anonymously.
- ❑ Security is maintained at a higher level than for most bank transfers, even though making a payment is easier and more convenient than ever before.
- ❑ Large purchases are protected by built-in escrow policies and can be insured by bonded third parties.
- ❑ System is policed: The system administration actively polices both buyers and sellers for fraud, misrepresentation and all forms of illegal transaction, and takes legal action as needed to maintain a high level of trust.
- ❑ Micropayments are supported down to a value of several cents. This is possible because of the low cost per transaction that the architecture makes possible.
- ❑ Payments are divided as needed: All payments including micropayments can automatically be divided among multiple payees as specified by sellers.

### **Retailers Compete on Expertise**

Currently, retailers compete with each other based on their ability to stock their physical stores with a profitable range of items at the lowest cost. In the new model, retailers carry no inventory — goods are shipped directly from a producer’s warehouse to the consumer, and retailers have a completely different function. In the new system:

- ❑ Producers set price rules: When offering a product for sale, the producer sets price rules that include shipping options and costs, a retail price, and the portion of that price that goes to a selling retailer.
- ❑ Retailers carry no inventory: Retailers “stock” a product by offering it for sale in their online shops at the manufacturer’s suggested retail price, or if they choose, at a discount that comes out of their portion of the sales price.
- ❑ Retailers become experts instead: The value that retailers add to earn their portion of the sales price is to stock the best products in a category and to make good recommendations



concerning products' design, suitability, ease of use, value, reliability, quality and safety. A retail "store" is simply an online mechanism or interface designed for transmitting that information in a convenient way.

Retailers thus cease to be shopkeepers and become instead qualified experts in the products they stock. In essence, being a retailer means being a product evaluator.

- ❑ Retailer reputation is key: Consumers choose retailers based on their record and reputation for making good recommendations.
- ❑ Retailers are aggregated by other retailers: To find a retailer you want to buy from in a market you're not familiar with, you go to an aggregating retailer, whose business depends on knowing which specialized retailers in given product areas have the best information and are least biased toward individual producers. Amazon is already exploring this model, and it will become further refined in a more competitive environment.
- ❑ Retailers make money from product evaluation: Whether as a retailer you function as a product evaluator or an evaluator of other retailers, you make money based on the quality of your evaluations. In this situation, the retailers who are genuinely on the side of consumers will be successful.

This system is the logical outcome when discovery shifts from a push model based on small geographic market segments to a pull model in which markets are national or global.

The effect this has on producers and product development strategies is even more dramatic.

### **Producers Must Focus on Product Quality**

In this new world, producers can no longer rely on push advertising to create demand for their products — instead, their products must satisfy the requirements of sophisticated critics in order to sell. This need radically changes strategies for successful product development:

- ❑ Introducing a new product becomes far less expensive, as long as it provides significant benefit to customers. A large advertising budget is no longer necessary, because of all the expert, trusted retailers whose livelihood depends on evaluating and recommending the latest and best products.
- ❑ Investment in research and development and identification of real customer needs therefore become far more important to producers than marketing and sales campaigns. In this system, quality and utility are what sell products.

### **Digital Publishing Comes of Age**

Applying the retail model described above to digital publishing will create big new markets for digital content. Consider what happens if "publishing" content is as easy as posting it to a public library site and paying a small fee to receive the equivalent of an ISBN number. An analog today is posting a home video on YouTube.

The difference is, as a content producer and owner, you would now include a price, license terms, and the portion of the price you will pay any "retailer" who sells your content when you post. These go into the library's "card catalog" along with your identifier and information about the genre, subject matter, audience and intent of the work you're publishing.

Typical prices for digital content might be as follows, in U.S. dollars:

- ❑ A photograph might be priced at 5 cents.
- ❑ A song or short story might cost 10 cents.
- ❑ A scientific or technical paper might cost 25 cents, because of its restricted market.
- ❑ A music album, low-resolution video, novel or textbook might cost as much as 75 cents or \$1.

Three objections can immediately be made to such a publishing model, especially by someone committed to the current system:

- ❑ Huge quantities of low-quality content would immediately become available — after all, everyone thinks he or she is a writer, musician or photographer, or some kind of artist. Literally millions of works would be published every year, making it impossible to find the few pearls in the vast manure heap.
- ❑ Good works would immediately be pirated — we all know that digital publishing doesn't work because everyone wants content on the Internet to be free.
- ❑ At those prices, no one would make any money. Artists would starve.

However, none of these objections turns out to hold water:

- ❑ Consumers would *not* be swamped by terrible content, because retailers would spring up for every market and submarket, serving all kinds of different tastes. Even in what is currently considered a fairly small market (lets say, bluegrass music or werewolf books), a person with taste and perspicacity could make a decent living just identifying and “stocking” the best works published every week or month. If you were a consumer of that genre, you could subscribe to the selections of your trusted retail mediator for less money a month than you now typically pay for one or two CDs or books, and you'd get a steady flow of interesting new content.
- ❑ Piracy would *not* take over. As many intelligent people have observed, endemic piracy indicates a pricing problem more than a legal or technical one. Note that people don't generally waste time copying paperback books on copiers to save money — it's more convenient and pleasant just to buy the book. As long as it's more convenient and pleasant to buy than steal, people generally buy. While that is not currently the case with digital publishing, the new system would support low enough pricing and enough real advantages to ownership that piracy would become a relatively small, tractable problem.
- ❑ People would make money. Let's do the numbers: Take the photograph priced at 5 cents. Suppose the photographer retained 4 cents of that and offered 1 cent to retailers. Further imagine that a successful retailer selects a different beautiful picture for your computer's desktop wallpaper every day. At 5 cents a day, a lot of people might subscribe, perhaps as many as 1 million people worldwide. That translates into a one-day royalty of \$40,000 for the photographer, and a steady income for the retailer of around \$70,000 a week. Or, consider the technical article at 25 cents. If it's a good article, it could easily be downloaded by a 100,000 people over five years, more if it's assigned as student reading. The author could easily make \$25,000 from such an article, as opposed to next to nothing today.

The same model also works for online news feeds, magazines and all kinds of information sources. The Internet now hosts sufficient numbers of people to support a wide variety of digital publishing that can translate knowledge and talent into good money.

This fact is particularly important to support the future of independent journalism. Already the Internet is eroding newspapers' business model by drastically reducing classified and

corporate advertising revenues, but so far it hasn't offered any viable alternative to make high quality online reporting profitable. The new system can fill that gap and fund the kind of vibrant independent press that is important for the health of democracy.

In the information age, we need intelligent filtering as much as we need good content. The new commercial model builds in strong financial support for both.

### **A Shopping Environment That Is Open, Easy and Fun**

Currently, the design of online stores is constrained by a combination of cost and technology. Although it's theoretically possible to create a shopping environment as beautiful and enticing as that of cutting-edge video games, the cost of creating and maintaining such an environment has always been too high in practice. Online stores generally settle for simple, fairly boring presentations that can be served to millions of customers.

The commerce layer deployed by the Open Channels Project would change that. Not only would it transparently take care of a lot of bookkeeping, it would also provide consistent, effective building blocks to let online stores create beautiful and interesting environments to shop in.

These building blocks would be publicly available, so that third-party developers could extend and enhance these capabilities with their own products, without compromising the underlying security of the system.

Anyone with rudimentary computer skills could easily create a store. Anyone with a digital camera could provide a far more interesting presentation than that of most current online businesses.

### **Integrating Package Shipping**

Currently, package shipping is reasonably efficient in the first world, and somewhat less so elsewhere. The Open Channels Project will work with package shippers to maximize efficiency, and even make possible anonymous shipping, where the person sending a package does not have to know its destination address directly. Transparent data exchange with shippers' computer systems together with intelligent logistics can bring down costs below what they are today.

### **Streamlining Customs Processing**

Even more important, however, is to engage governments around the world in this process. In order to let a buyer in one country easily purchase from a producer in another, customs in both the source and destination country must be easier to navigate than they currently are.

Where today the import/export business is the domain of freight forwarders who handle container-loads of the same product, customs processing must be modernized to be able to handle high volumes of small packages. Once again, the system's security, integrity, and trust in its administration can help in the design and implementation of streamlined customs offices.

A significant incentive exists to make this happen. The people who would benefit most are small business owners and consumers, not the large multinationals. The resulting trade would tend to benefit nations on both sides of the fence.

### **Direct Trade + Microfinance = Prosperity**

Combining the benefits of much more efficient trade connections with proven microfinance initiatives promises to create prosperity and hope in many places where there is little now. People with much to offer and few resources will need help getting started, but then they'll be able to be productive in a way that is currently hard to imagine.

### **Connecting to the Developing World**

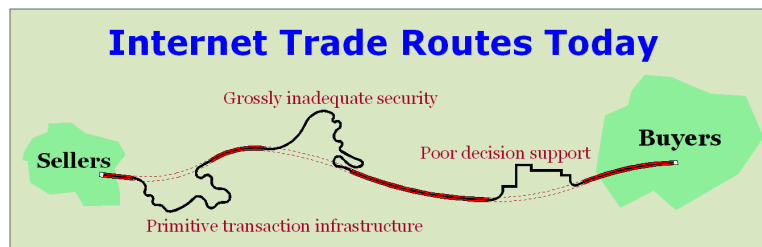
People in a poor village in Africa, India or China can in fact play a part in a commercial model that relies on Internet technology. The revolutionary laptop developed by Mary-Lou Jepson and the One-Laptop-Per-Child organization, now known as the XO, suggests the answer. Costing less than \$100, with built-in power and mesh networking and rugged construction, this machine is far more than a child's computer. It could easily serve as an educational tool during the day and an international storefront at night.

Although the XO is the most advanced device of its type, others are also being developed. Intel is not far behind, with its \$400 Classmate PC. It's not hard to imagine that mobile convergence will produce other small, powerful and inexpensive devices deriving from smart phones that will connect people all over the world to the new commercial network.

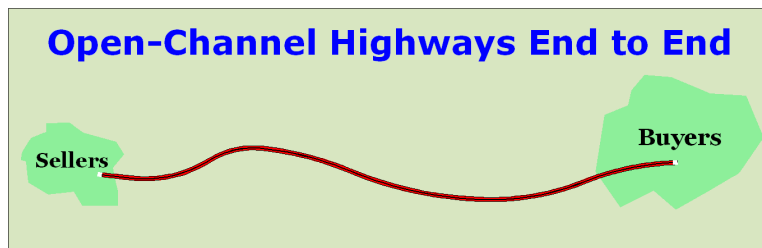
### **All of These Features Must Converge**

To open up the promise of open channel trade, all of the features described above must begin to come together. Fixing one trade bottleneck without addressing others does nothing to increase the overall capacity of a channel. Only by removing all bottlenecks can you achieve high throughput.

Think of Internet commerce as a highway — today, it's a road under construction.



To make it work as it should, we must complete the highway from one end to the other.



## 5. Conclusion

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With a global economic crisis facing us, it's time to act. We have the means in our hands. We can as a world culture unleash the power of the Internet for global prosperity by opening existing Internet channels and underpinning them with a nonprofit-administered open infrastructure. This change benefits everyone from the world's poorest people through the beleaguered middle classes of the first world, and beyond.

For more information on the Open Channels Project, including white papers on how OCP proposes to apply technologies to provide the solutions discussed, contact [harold@openchannelsproject.org](mailto:harold@openchannelsproject.org).