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Africa is generally poor and uneducated, but has very deep mobile penetration. The MicroMobile system joins crowdsourcing with an application deployment system to bootstrap education, create dramatic new employment opportunities, and generate radical new revenue streams for MNO's in Africa.

MicroMobile is a single platform that easily integrates into the top 4-5 MNO's in Africa (MTN, Vodacom, Safari, Celltel), covering 30 countries and roughly 250 million people. It provides billing, hosting, and distribution for the MNO's along with SLA's and associated support services. It has an open API/SDK so anyone can write applications to it and supports integrated and automatic activation, collection, and payment. This means that anyone can deploy their app onto the system with no more cost than their development time, and that the MNO's can collect a percentage of all traffic generated as a result.

As we've seen in Japan with DoCoMo, this aspect of the model works extremely well when you have a generally affluent and well-educated populace with deep cellular penetration. However, of those criteria only the cellular penetration applies in Africa. There is a huge need for educational sources there, and unemployment is roughly 60%. While MicroMobile can provide a major economic opening for selling services and applications, these functions alone would be missing a world-changing opportunity to drastically increase revenue and improve the education of the populace at the same time.

Which brings us to crowdsourcing. The best known example of crowdsourcing is Amazon's Mechanical Turk, which ostensibly provides an easy-to-use infrastructure for deploying large quantities of small pieces of discreet work to anyone in the world. Unfortunately, it has largely failed for two reasons. One, because 1st-world banks won't play nice with 3rd-world banks due to the perceived risk, and two, because it is impossible to generalize piecemeal tasks to any useful degree. What Amazon discovered is that by making a universally accessible interface for crowdsourcing they disabled the ability to truly leverage the human element that required crowdsourcing in the first place. Where crowdsourcing has succeeded most profitably is in utilizing niche markets of expertise and capability.

At present that expertise does not exist in Africa except in extremely localised pockets and for very specific needs. Barring a widespread and stabilized education system it is currently impossible to obtain a baseline or alternative specialized education without costly foreign aid. There is a better way, however - give such education away for free. Here's how it works:

- 1) The service providers using the MicroMobile system distribute training and educational material for free to anyone who wants it via SMS, MMS, IVR, etc. The system is flexible enough to route based on language, ethnicity, and application.

2) Those who feel they have learned enough to qualify can pay a small fee (in airtime minutes) to take an exam via SMS.

3) Those that pass the exam can then send a PCM at any time to the service provider, signaling that they are ready for work.

4) The next available request for information or service that the service provider receives gets passed to the qualifying individual. This generates profit for three parties:

- The MNO collects calling or SMS fees from the person requesting the service.
- The service collects fees for providing their part of the service.
- The qualifying individual collects fees for providing their part of the service.

5) The results of the person performing the service are automatically rated. If they complete the task to satisfaction, their performance ranking increases. By dynamically giving work first to the people who produce the best result, there's a strong motivation for skill acquisition.

This allows for applications that address localized, situational, and cultural needs which are organically driven and generatively devised. Those applications that are more popular create more revenue, from which the MNO's and Micromobile take a part. When the needs that drive the applications change, new applications can be flexibly created and deployed with no effort on the part of the MNO's. This allows companies to identify needs, educate potential employees, and create work dynamically and at radically low costs. It behooves any company using the system to provide as much education as possible to increase the quality of their potential labor pool, and the quality of education becomes tied directly to those companies' profitability, all of which continues to increase the overall education of the country's populace.

While crowdsourced services can be made available internationally, the primary value is a means for local groups to create applications suited specifically to their needs. I.e., if a farmer's collective needed a way to provide agriculture advice, the best farmer for the job would rise to the top by virtue of the ranking system, meaning that "being an expert" suddenly becomes a viable career path.

Because the entire system is mobile, workers can be anywhere and use a simple PCM to indicate availability for work whenever they are available, creating a flexible source of income that allows for varied life situations. Anyone who wishes to work simply needs to learn enough of whichever service area they wish in order to qualify, meaning that meritocratic efficiencies can drive capabilities based on individual interest.

Giving people the skills to provide services to crowdsourced tasks elevates the existing operating capital in the local 3rd-world economies, which creates a need for more specialized skill education, which increases the value of the services that can be provided via crowdsourcing... etc. The MicroMobile system creates a virtuous cycle based on cellular-distributed education and crowdsourced economies.

# A Final Note

Initially this could be conducted exclusively through SMS. As more advanced handsets trickle down to the African markets, however, the means for this system to elevate to whole new educational horizons becomes apparent. This ties into a major trend in Africa today - now seen with Vodafone live - which allows browsing bandwidth for free, so users can surf web sites via phone without incurring costs. Once that happens, consumers can have access to an internet worth of education - and MicroMobile can provide them with a means to achieve employment with it.