

December 29, 2006

To: Walter Anderson

From: Lloyd Etheredge

Re: Visual Display Systems for Millennium Goals

The Secretary General can accelerate progress, improve coordination, and enroll wider support for the UN's Millennium Development Goals by commissioning new online (map-based) visual display and measurement systems.

The progress in achieving UN goals (Table 1) can be displayed in online maps. For example, to measure and display progress in access to potable water, online maps will display, in red, each country and (by clicking on the display) each village in every country where the problem remains unsolved. Then the colors of villages, and eventually entire countries and regions, will change as the problem is solved.

These maps also can be used by the UN and NGOs for coordination and fund-raising, as online War Room display systems. Anybody, in any country, who is interested to help solve the problem can click on a country, or even a village, and access information about unmet needs, the name of any NGO that has identified a way to solve the problem of that village, and the resources that it needs - for example  $x$  hundred dollars to dig a deep well; or for a solar-powered filtration device for drinking water. And they can make the donation online.

NGOs also can use these displays as feedback to their members. Every Monday morning, the first thing that interested activists can see when they turn on their computer is a map-based display of the rate of progress (or lack of it).

### Precedents

These visual display systems help to motivate progress. They seem to function better

than numbers alone. For example, in the 1990s the Internet Society used a monthly global map to show the global spread of Internet connectivity: the display energized people to create new links and watch the global map change color. Visual displays of progress (e.g., thermometer charts) are routinely used for television appeals by charities.

Soon, I think we will find that the official goals that governments ratified through the United Nations and World Bank are more modest than they should be. We probably underestimate how much capability we have, once democratic power can be brought online.

### Implementation

The World Health Organization has announced that it will create a basic online map-based display in several areas of its responsibility.<sup>1</sup>

Other map-based prototypes already exist. For example, the American Association for the Advancement of Science has created an online map-based display system with information on 243 organizations concerned (locally, regionally, nationally, or internationally) with the Plata River Basin in Latin America (<http://www.aaas.org/programs/international/eaor/index.shtml>).

- My recommendation is that the Secretary General invite the Gates Foundation and the Google Foundation to provide advice about the possibilities of these (next-generation) map-based display and measurement systems to accelerate international cooperation. And to develop a prototype, concerning UN Millennium health goals, that could be adapted for other Millennium (and other UN) Goals.

The Gates Foundation is likely to agree: I have communicated with them about this

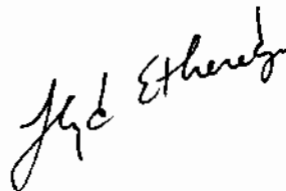
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<sup>1</sup> <http://globalatlas.who.int> [there is no www in the address]. It is unclear whether the maps will provide sub-national breakdowns or click-through options to the village or regional levels. WHO may not, itself, provide activist links to NGOs.

idea, and Bill Gates presented a vision along these lines to a Davos conference on world health several years ago. The Google Foundation is currently directed by a physician, who is a leader in international public health: the two founders of Google are strong supporters of the Clinton Global Initiative to accelerate international progress; and Google has a global map-based (actually, satellite-based) technology that could be adapted for strategic planning and coordination.

### From Visual Display to Large-Scale Collaboration

The Secretary General's invitation will not simply produce a convenient information device. Map-based display systems also (as discussed above) can be an enrollment device; and a first-step in building large-scale collaboration systems for global problem solving, using Internet technology. Thus it might be helpful to invite MIT's AI Lab, or other institutions with similar visionary interests in large-scale collaboration systems, to be involved in the design.<sup>2</sup> Properly done, the first generation display systems can be open-architecture and adapted and built upon by many UN agencies and UN-certified NGOs.



Contact: Lloyd S. Etheredge

lloyd.etheredge@yale.edu (email)

(301)-365-5241 (v)

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<sup>2</sup> See also Robert E. Horn, Visual Language: Global Communication for the 21<sup>st</sup> Century (Bainbridge Island, WA: MacroVu, Inc., 1998).

Table 1  
UN Development Goals for 2015

**1. Eradicate extreme poverty and hunger**

- Halve the proportion of people with less than one dollar a day.
- Halve the proportion of people who suffer from hunger.

**2. Achieve universal primary education**

- Ensure that boys and girls alike complete primary schooling.

**3. Promote gender equality and empower women**

- Eliminate gender disparity at all levels of education.

**4. Reduce child mortality**

- Reduce by two thirds the under-five mortality rate.

**5. Improve maternal health**

- Reduce by three quarters the maternal mortality ratio.

**6. Combat HIV/AIDS, malaria and other diseases**

- Reverse the spread of HIV/AIDS.

**7. Ensure environmental sustainability**

- Integrate sustainable development into country policies and reverse loss of environmental resources.
  
- Halve the proportion of people without access to potable water.
- Significantly improve the lives of at least 100 million slum dwellers.

**8. Develop a global partnership for development**

- Raise official development assistance.
- Expand market access.
- Encourage debt sustainability