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INFORMATION LOCALIZATION IN
RURAL AREAS OF EMERGENCY PLAN COUNTRIES

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INFORMATION LOCALIZATION: A CRITICAL NEED

Even in the United States, a vital link between literacy and health is becoming increasingly recognized. This development is a refinement of extensive findings of direct relationships between socioeconomic status and health outcomes (morbidity, mortality, etc.), the recognition of educational levels as a component of socioeconomic status, and a focusing in on literacy as a specific and discrete component of educational attainment levels. This has led, for example, to health literacy being included in the goals and objectives for the nation in *Healthy People 2010* and functional literacy tasks related to health being included in the National Assessment of Adult Literacy Survey (NAALS). A particularly critical demonstration of this link can be found in classes taught in English for speakers of other languages (ESOL), where huge gaps exist between what is taught about health care in the classroom and the practical understanding and health-related experiences of the students.¹

How then is the President's Emergency Plan for AIDS Relief to even approach its goals if the literacy of the recipients of this aid is not taken into account? By "literacy" in this context we emphatically *do not* mean the skills necessary to understand the complexities of AIDS treatment and prevention in terms that even a casual newspaper reader in the United States would understand. We do not define "literacy" for our purposes as even attaining the ability to read or write. What we *do* mean is that the populations targeted for assistance in the 14 Emergency Plan countries must receive information in a language that they speak every day—a language in which they are *functionally* literate—and in a cultural context that is meaningful to them in terms of their own societies. In other words, the health providers involved in the Emergency Program must themselves become "functionally literate" in the languages and cultural contexts of their patients; or a more practical approach must be adopted by providing them with access to the talents and skills of organizations and people who *can* localize treatment and prevention information in the language and cultural context of its audience.

The magnitude of this task appears overwhelming. An estimated 1,082 different languages are spoken in the 14 Emergency Plan countries. Most of these languages are spoken in rural areas of those countries by people who comprise more than an estimated 67% of the population and who do not have functional fluency in a language of wider communication (LWC) such as Swahili, French, Portuguese, Spanish, or English. Language itself is not the only barrier to communication with these rural populations. Unlike urban dwellers in the Emergency Plan countries, most of whom have been exposed to the Westernized cultural influences of the developed world, rural populations dwell primarily in small communities and villages where ancient tribal and family cultural influences predominate. Local social and governing structures are not always amenable to outside influences, and the acceptance of health care workers and the trustworthiness of their message cannot be assumed. As difficult as the task appears, the only meaningful way in which the goals of the President's Emergency Plan for AIDS Relief can be met is through localization of the message of prevention, and the protocols for care of those suffering from HIV/AIDS, in a language and cultural context that can be understood by local populations and accepted by them as trustworthy and effective.

¹ See, e.g., Kate Singleton, *ESOL Teachers: Helpers in Health Care*, FOCUS ON BASICS 5:C (Feb. 2002).

DIFFUSION OF INNOVATION—A THEORETICAL UNDERPINNING
TO INFORMATION LOCALIZATION

Shellbook Publishing Systems, LLC (SPS) has developed a unique method for localizing information—that is, making information available to people in a way in which it can be readily understood in terms of language and cultural context. This approach incorporates a process known as the *Shellbook*[®] *method*. The term “Shellbook” refers to a format in which information, training, and publishing resources are integrated. In the Shellbook method, information is presented in such a way that any local community can readily adapt it to its own language and cultural perspective while retaining the conceptual integrity of the core material. The methodology on which the method is based was first developed by Michael W. Trainum, SPS’s founder and Chief Executive Officer, while serving as a linguist/missionary in a small village in Papua New Guinea—the world’s most linguistically diverse country, where 835 distinct languages are spoken by a largely rural, village-oriented population. The Shellbook method has been transformational at the grassroots level in Papua New Guinea, where, in 1993, it was adopted by the Papua New Guinea Department of Education for use nationally in its Elementary Education Reform. To date, the Education Department’s curriculum officers have developed more than 80 titles in the Shellbook format. These have been localized by communities where *more than 435 languages* are spoken. This success—achieved in the difficult linguistic environment of Papua New Guinea—proves beyond a doubt that, at the grassroots level, where it ultimately counts, the Shellbook method works.

Conceptually, the Shellbook approach recognizes and adheres to the *diffusion of innovation theory*, which has been championed by Dr. Everett M. Rogers and thousands of others.² The diffusion of innovation theory holds that, in determining the rate of adoption of any innovation (in our case the innovative methods for the treatment and prevention of HIV/AIDS), there are five characteristics that must be studied:

- the *relative advantage* of the innovation—in other words, whether the innovation will be perceived as better than the idea that came before it;
- whether an innovation is perceived as being *compatible or consistent with* the existing values, past experiences, and needs of the potential adopters of the innovation;
- the extent to which the innovation is perceived as being *complex* or difficult to understand and put into use;
- whether the innovation may be *experimented* with on a limited basis; and
- the degree to which the results of an innovation are *visible* to others.

Shellbook Publishing Systems’ method of information localization—called *Shellbook Micro-Publishing*[™]—deals with the assumption underlying all of these characteristics of an innovation: that a prospective adopter of an innovation must first understand the innovation at least in rudimentary fashion and be able to discern its implications to him or her. Without that essential first understanding, there can be no perception of an innovation’s *relative advantage, compatibility, complexity, experimental possibilities, or visibility to others*. Thus, SPS, using its Shellbook concepts and Shellbook Micro-Publishing methods, *first* brings that understanding to

²Everett M. Rogers (2003). *Diffusion of Innovations* (5th ed.). New York: The Free Press.

potential adopters of information in a language that they understand and speak every day, and in a way that is meaningful to them in terms of their distinct cultural backgrounds and customs.

Shellbook Publishing Systems' interest in the President's Emergency Plan is not simply to study the probabilities of whether and to what extent innovations in HIV/AIDS treatment and prevention will be adopted in the Emergency Plan countries. It is to *proactively address* the characteristics by which scholars and practitioners of diffusion of innovation theory predict those probabilities of adoption and diffusion. For instance, an integral component of the Shellbook Micro-Publishing method involves the training of in-country "mentors" who have close ties to a region within a country and who in turn recruit and train village and tribal leaders in the Shellbook methodology and technology. These local leaders then confer with groups and individuals within their own communities on the most effective way of presenting HIV/AIDS-related material in terms of language and the degree to which a new concept can be made to appear more compatible with local mores and social and health practices. This technique has proved to be effective in new ideas being perceived as . . . *compatible or consistent with the existing values, past experiences, and needs of the potential adopters of the innovation*, a key characteristic identified by scholars as increasing the likelihood of adoption of an innovation.

A PRACTICAL AND WORKABLE APPROACH TO INFORMATION LOCALIZATION

As mentioned above, Shellbook Publishing Systems' methods are built around the *Shellbook* publishing format. This format integrates training, adaptation and publishing assets in a broadly distributable, electronic, multi-media (text, illustrations, audio and video) "shell" known as a *Shellbook Resource Edition*. The Resource Edition is then transformed in a series of progressively narrower (in terms of geographic region, language and culture) regionalizations and localizations into a *Local Language Edition* of the Shellbook which can be printed or—depending upon the availability of computers—used in its electronic form for viewing or subsequent print-on-demand. Rigorous training is conducted at all levels of the process, first by SPS personnel or contractors and then at the next level by the in-country "mentors" who have been trained by SPS in the Shellbook concept and the use of our unique computer applications. The primary electronic tool used by SPS is our proprietary software known as *Shellbook Publisher—World Edition™*, a highly advanced desktop publishing application that facilitates the creation of multiple derivative and subderivative versions of an original text, each of which is created by local authors in their own language and adapted to local cultural perspectives through the use of locally meaningful illustrations and other media and the incorporation of local stories, traditions, and the like to give the message a more localized perspective. At the same time, the software program is structured so as to require that the integrity of the core message is retained, a key concept in health related publications. SPS typically licenses this software on a countrywide or regional basis through "open distribution licenses," which ensures immediate and widespread availability of the software to developers and non-commercial distributors of Shellbooks.

As discussed earlier, at the local level Shellbook Publishing Systems' methodologies involve the intimate and meaningful participation of members of the community so that, when finally published as a Local Language Edition, the work will be in every sense "owned" by the community that authored it. Working at the grassroots

level, as SPS does, ensures that the innovations sought to be introduced will be perceived as *simple* rather than *complex*; that the innovations can be *experimented with* at least in terms of their manner of presentation; and that the results will be *visible* throughout the community and in neighboring communities. These are all characteristics of innovations that are likely to be widely diffused and adopted, a principal goal of the President's Emergency Plan.

The Company is presently under contract with the Papua New Guinea National AIDS Council to prepare and disseminate material on HIV/AIDS prevention in 235 local languages spoken by small, rural, scattered communities throughout that country. In the process, an entire network of local citizens will be thoroughly trained in the Shellbook concept and the use of the *Shellbook Publisher* and *Shellbook Library Server* technology. This trained network will ensure that the results of the Papua New Guinea AIDS prevention program will be *sustainable* over many years and available to an ever widening circle of local communities. The HIV/AIDS project is a part of a larger effort in Papua New Guinea—known as the Integrated Development Information Network, or IDIN—to localize all of its information to the needs of as many of its local communities as possible. Shellbook Publishing Systems has been invited to join the Executive Management Board of the IDIN Centre, which will oversee the entire countrywide information localization project. Papua New Guinea has recognized that “language diversity, while enriching cultural diversity, has itself resulted in problems in the overall development of the nation and her people.”³ This is no less true in the countries targeted by The President's Emergency Plan for AIDS Relief. Shellbook Publishing Systems' work in Papua New Guinea—and particularly the program being undertaken for the National AIDS Council—could serve as an excellent model and pilot program for the massive job ahead in Africa and the Caribbean.

³ Authorizing Resolution for establishment of IDIN Centre, adopted September 27, 2003 by the Board of Governors, Papua New Guinea University of Technology.