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International Technology Investment, Ltd.

DEVELOPMENT TECHNOLOGY EXHIBITIONS:

AN ASSESSMENT OF THE
ZIMBABWE EXPERIENCE

Submitted to:

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I. OVERVIEW

From September 15 to 19, 1982 in Bulawayo, Zimbabwe, the Agency for International Development sponsored a U.S. Pavilion at the Rural Development Technology Exhibition. This exhibition was the second such activity which received AID support. In November 1981, the U.S. Pavilion at the Technology for the People Fair, an exhibition held in Mexico City, Mexico, received some AID financial assistance.

The U.S. Pavilions in both exhibitions were designed and implemented by A.T. International's Business and Technology Services Department. A.T. International is an organization which seeks to assist developing countries to build strong small enterprise infrastructures. A.T. International provided a major portion of the funding for the Mexico activity and partially subsidized the involvement of key staff members in the AID-funded Zimbabwe effort.

A.T. International was established by AID and the U.S. Congress as an extension of the U.S. development assistance program. Its mandate was to promote innovative approaches to the use of technology to bring about economic development among poorer communities in developing countries. A.T. International's involvement with development technology exhibitions was designed to look into the ways in which technology exhibitions could be used to further this mission, while, at the same time, to provide a channel through which U.S. businesses could be involved more directly in development activities.

Development technology exhibitions (as this type of exhibition will be referred to throughout this paper) appear to hold

potential as cost-effective and efficient extensions of AID in-country activities and of overall agency priorities. The purpose of this paper, then, is to look at carefully--based on experience--how and why such exhibitions can be important to AID, to U.S. companies, and to host countries.

The focus of this assessment is on the Zimbabwe exhibition: AID's financial investment in that activity was significantly greater than it was in Mexico, and the effort in that country was undertaken with the participation of the AID mission. However, since the writers of this paper also participated in the design and implementation of the Mexico exhibition and have remained in touch with exhibitors, the Mexico experience also influences the conclusions and recommendations presented in this paper.

The Zimbabwe Rural Development Technology Exhibition (RDT '82) was sponsored by the Ministry of Rural Development; the patron of the exhibition was the Honorable Canaan Banana, President of Zimbabwe. The stated goal of the activity was to bring to Zimbabwe technologies from around the world which would be relevant to the expressed rural economic development priorities of the countries of the Southern Africa Development Co-ordination Conference (SADCC). All the SADCC countries endorsed and supported the exhibition; thus RDT '82 was regional in scope.

The exhibition was organized by Andry Montgomery, Ltd., one of the largest exhibition organizers in the U.K. and one experienced in running international trade fairs. Organizers of the U.S. Pavilion at RDT '82 first met the Andry Montgomery representative at the site of the Mexico exhibition. Based on the success of the U.S. Pavilion there, Andry

Montgomery invited the director of the U.S. Pavilion to participate in the formation of RDT '82. The writers of this paper, thereafter, worked closely with the Andry Montgomery representative, particularly on activities related to ensuring the participation of local development groups and on defining the nature of the seminar activities to be held as part of the exhibition.

The U.S. Pavilion at the Zimbabwe Rural Technology Exhibition included representatives of 15 business firms, most of them small, and 4 private development organizations. Technologies and products of five other firms not able to send staff people to the exhibition were represented by A.T. International. Also present to participate and assist were a specialist in technology brokering and a venture capitalist.

The overall aim of the U.S. Pavilion was to bring to representatives of Zimbabwe and other SADCC countries a cross-section of the U.S. private sector as it is relevant to the development priorities of these countries. Organizers of the Pavilion wanted visitors and other exhibitors to see and to "feel" the strength, vitality and exuberance that characterizes the American approach to business and to life. One of the U.S. exhibitors commented on this: "There was overall excitement to see a U.S. presence in Zimbabwe: you could sense it in visitors. The fair was the first piece of Americana in Zimbabwe in the past few years."

The businesses represented at RDT '82 were chosen for the appropriateness of their technology to regionally defined priorities and for their willingness to enter into longer-term investment (joint venture and eventually local manufacture) rather than straight export. Most businesses were new to export markets in general and to Zimbabwe in particular.

Private development groups represented at RDT '82 were invited because of the relevance of their service mix to country development priorities and their potential for being able to use the time in-country effectively to build solid, ongoing program relationships with host country development organizations. They were considered an important part of the exhibition, for the nature of their services appeared to make them natural links between the cultural and social concerns of communities and the enterprise structures to which these communities must relate if economic development is to be realized.

Since most of the businesses had no experience working in developing countries, organizers prepared special information packages related to doing business in the area and brought to the exhibition representatives of the U.S. business community skilled at packaging business deals and working with aspects of international finance. One of these individuals represented a group of Texas and Oklahoma business people which has now developed a program to link its own business community more directly to enterprise and development opportunities in Third World countries.

In preparation for this short-term assessment of results, ten of the businesses and three of the private organizations were contacted; both their Zimbabwe experience and events since the exhibition were reviewed in an hour-long telephone interview. This latest interview was added to the results of two earlier interviews, both carried out on-site at the U.S. Pavilion in Zimbabwe (the first just prior to the opening of the exhibition; the second, immediately following the close of the exhibition and prior to the departure of the exhibitors from the country).

Since only four months have passed since the end of the Zimbabwe exhibition and since a long lead time is necessary for most "deals" of various types to eventuate, the Zimbabwe results are still unfolding. However, there appear to be conclusions which can be drawn and used as guidelines for those working with such exhibitions. And when the experience gained by the writers in working with the Mexico exhibition and its follow-up is added to that of Zimbabwe, there emerge clear signals which can be used to guide decisions as to the feasibility and nature of AID involvement in other development technology exhibitions.

II. SUMMARY OF SIGNIFICANT RESULTS

The overall conclusion of this report is that development technology exhibitions which focus on linking U.S. business, particularly small business, to developing country private and public sector efforts can indeed be appropriate activities for AID participation. Such exhibitions can be used by AID to further both mission and agency-level objectives related to private enterprise development and promotion of indigenous small enterprise. And based on the Zimbabwe experience it is clear that such exhibitions can have both business and development impacts.

SOME BUSINESS PERSPECTIVES

As the information presented in this report will show, development technology exhibitions, without a doubt, represent important opportunities for the U.S. business people involved. All who participated in the Zimbabwe exhibition are still pursuing leads and working on follow-through activities. While total dollar value of these efforts is difficult to estimate at this early stage, preliminary calculations indicate that the \$4 to \$6 million dollar figure set previously is still on target. (See Figure 1.)

All businesses participating in the Zimbabwe exhibition express commitment to continuing their efforts vis-a-vis the country despite the significant obstacles most already have encountered. With the exception of but two of the private development groups and two of the businesses, U.S. exhibitors attending the Zimbabwe activity did not know the country prior to the exhibition and would not now be involved with Zimbabwe if they had not attended RDT '82.

FIGURE 1

U.S. EXHIBITOR INFORMATION: RDT '82 ZIMBABWE

C O L U M N N O .	E X H I B I T E R	T E C H N O L O G Y	P O T E N T I A L B U S I N E S S			P O T E N T I A L J O B C R E A T I O N	F O R E I G N E X C H A N G E P O T E N T I A L	C O M M E N T S
			D I R E C T S A L E S	J O I N T V E N T U R E	D E V P R O J E C T S			
1	Industrial Services Inc.	TERRASORA	50,000 B	-	-	10	-	-
2	Western Solar Refrigeration, Inc.	PV SOLAR PUMP REFRIGERATOR	30,000 B 6,000 A	-	50,000	10	YES	-
3	Garrett Turbine Technology	BLADELESS TURBINE	750,000 B	-	-	-	NO	INTERESTED IN BARTER DEALS
4	Sunvaat Corporation	SOLAR CELL FABRICATION	-	-	-	-	YES	R + D CONCEPT
5	AVL International	PRODUCTION LOANS	50,000 B	-	50,000	16	YES; SOLAR CELLS	WILL TRAIN INTERESTED IN BARTER DEALS
6	Solar Electronics	SOLAR CELL COMMUNICATIONS	50,000 B	-	500,000 (B)	128	YES; TEXTILES	-
7	General Technology, Inc.	HYDRA-PRESS	250,000 B 59,000 A	-	500,000 (C)	8	NO	-
8	Northern Counties	TREATED WOOD	1,200 A	-	-	24	YES; SHOES	-
9	Int'l TransAmerica Corp.	AGRICULTURAL MEDICAL SYSTEMS	-	-	500,000	26	YES; WOOD	-
10	Commerce Group, Inc.	SILY USED TRACTORS	-	-	200,000 (F)	8	NO	TECHNICAL ASSISTANCE FOREIGN EXCHANGE PROBLEM
11	Silopress, Inc.	mobile silo	1,200,000 B	-	700,000	12	NO	-
12	Arco Solar Industries	PV systems	250,000 A	-	-	6	NO	-
13	Blue Sky Water	soft pump	INFORMATION NOT AVAILABLE	-	-	-	-	-
14	Bowdon International, Inc.	whirl pump	INFORMATION NOT AVAILABLE	-	-	-	-	-
15	Domestic Technology Int'l, Inc.	energy	1,500 A	500,000	-	55	YES	JOINT VENTURE STARTED YES
16	VITA	technical assistance	2,000 A	-	30,000	6	YES; STOVES	-
17	PFP	technical assistance	-	-	150,000	-	-	-
18	IAAD	technical assistance	-	-	30,000	-	-	-
19	Lifewater	boilerkeeping, water systems	-	-	-	-	-	-
20					175,000 (4)	-	-	-
21			2,565,700	500,000	3,235,000 (23)	309		

NOTES: A. SALES MADE AT EXHIBITION
 B. LICENSE AGREEMENT/DISTRIBUTORSHIP

P O T E N T I A L B U S I N E S S	
DIRECT SALES	\$ 2,565,700
JOINT VENTURE	500,000
DEV. PROJECTS	3,235,000
	\$ 6,300,700

Today, however, at least 10 of the exhibitors are engaged in the design and development phases of long-term development projects, valued at approximately \$3.2 million. There are 23 projects, most of which are aimed at creating jobs and new enterprises. Three of the exhibitors have set up distributorships; one is working out a promising joint venture which will employ 55 people. While some significant direct sales benefits (over \$2.5 million) are expected to result from the exhibition, this is an added benefit, since most exhibitors did not consider sales a primary reason for their attendance.

Six of the exhibitors in the U.S. Pavilion are working on license agreements, which would lead to start-up enterprises. Two exhibitors have indicated their intention to pursue barter deals as a means for dealing with foreign exchange problems.

All businesses which are working out specific deals have encountered foreign exchange obstacles, but all report an increased ability and commitment to deal with these problems due to a greater understanding of Zimbabwe derived from participation in U.S. Pavilion activities.

Such understanding of the foreign market context is but one of the development, as opposed to purely business, impacts defined as part of this effort. Businesses participating in the Zimbabwe exhibition reported significant benefits--to themselves, to the U.S. and to Zimbabwe--in the areas of technology exchange, market intelligence, political impact, market strategy design, and education.

SOME DEVELOPMENT PERSPECTIVES

As a prelude to the next section's in-depth look at various aspects of U.S. involvement in the Development Technology Exhibition, what follows

here is a quick synopsis of some of the significant benefits of that activity, particularly of the more development-oriented benefits or results areas. To provide a better view of the many ways in which a development technology exhibition can have impact, these comments are presented from a variety of perspectives.

1. Benefits from the SADCC perspective include:

- Access to technology information: all of the countries of the SADCC were represented and participated in the activities. Women from a Botswana weaving cooperative learned of and worked with the production handloom in the U.S. Pavilion.
- Opportunity to familiarize people from all over the world with SADCC goals and aims: it was clear from U.S. exhibitors that most had never heard of SADCC, yet by the end of the exhibition they came away with understanding of SADCC goals.
- Expanded potential for generation of foreign exchange: most of the U.S. exhibitors, for example, made contacts in other SADCC countries, particularly Botswana, and a number are designing small enterprise projects there.

2. Benefits from the Zimbabwe perspective include:

- Inexpensive access to technology and market information for both business and government leaders.
- Opportunity to market Zimbabwe's own productive capacity: U.S. exhibitors were favorably impressed and surprised.
- Goodwill and public relations benefits accruing to Zimbabwe, solidifying a leadership role for that country within SADCC

in its move toward economic independence from South Africa.

- Generation of long-term relationships between U.S. and Zimbabwe business designed to increase foreign exchange generation potential.
- Expanded potential to meet rural development priorities, particularly in terms of small enterprise development and employment of rural poor through introduction to technologies and entrepreneurs to help with such efforts.
- Political impact within the country through an exhibition which successfully and visibly merged both business and development groups and goals.

Benefits from a U.S. perspective include:

- Enlightened business community representatives: participants in the U.S. Pavilion learned a great deal about the realities of doing business in foreign countries. In the way of small business, this information will be passed on to others, thus increasing its value many times over.
- Access by AID to a range of businesses able to assist with project implementation in LDCs. Businesses can be chosen by missions for the match between country priorities and their technologies; mission people can determine full relevance as businesses participate in exhibition activities.
- Opportunity for political impact through expanded interaction between U.S. small businesses and Zimbabwe enterprises, both public and private, at a time when Zimbabwe has not

clearly defined its stance toward private enterprise.

- Contributions to the development of a stronger U.S. small business community: to the extent linkages are viable, U.S. small businesses and communities within the U.S. benefit in terms of jobs and income.
- Public relations impact generated by the success of the U.S. Pavilion and the contributions of the participants within the pavilion to the overall exhibition.
- Generation of opportunity for expanded U.S. investment in-country holding potential for foreign exchange generation and creation of new jobs.

SOME CONCLUSIONS:

Finally, in summary, there are a number of particularly significant conclusions which should be stated as a prelude to the more detailed discussions which follow in Section III. The first set of conclusions relates to U.S. small businesses and their potential for assisting development efforts through participation in development technology exhibitions; other conclusions relate to such exhibitions in general.

1. Small businesses participating in such exhibitions do not define their success purely in terms of business deals: they do place a high value on the opportunity to make contacts, carry out market intelligence activities and contribute to the country and the region.

2. Small businesses as a rule do not know how to target their full capacity to LDCs. They tend to approach LDC markets with products, when they should approach with turnkey packages in much the same way large businesses do. Recognition of this fact, which did occur in Zimbabwe,

can lead to significant impact on the company's long-term profitability and to increased opportunity for business impact from the company perspective and development impact from the country point of view.

3. Small businesses make significant investments when they make the decision to attend such exhibitions. Attendance can cost an exhibitor anywhere from \$10,000 to \$20,000 in cash, not to mention salaries and opportunity cost. Because of the size of the investment (sizeable even in the cases where there has been some financial support), businesses appear to stick with the potential deals, as long as possible. This is an important factor in developing long-distance business relationships.

4. Small businesses attending development technology exhibitions will be more successful if their technologies and skills are matched carefully to enterprise opportunities identified in-country. In this way the development technology exhibition is a first step in a dialogue leading to development, rather than a brief information exchange which goes no further. In the case of Zimbabwe, exhibitors were chosen because their technologies fit Zimbabwe's priorities and production capacities. Today all are in continuing discussions with contacts in Zimbabwe.

5. Small businesses require follow-through assistance, particularly in the area of project design and interface with government ministries and public institutions. It is clear from both the Mexico and Zimbabwe experiences that the most viable entry for many U.S. small businesses to developing country economies will be through incorporation of their technology into government-funded activities. However, most business-people have no knowledge of how to design and package a development

project: this can impose a major constraint on their development impact if not addressed by exhibition sponsors and organizers.

6. All parties involved in the Zimbabwe Development Technology Exhibition gained: it will be repeated in 1984. Results for 1984, however, will be maximized for the U.S. only if objectives are clarified and criteria set for participation.

7. AID missions can use development technology exhibitions effectively when such activities can be designed to assist the mission to meet its program objectives.

8. Development technology exhibitions are specialized marketplaces where the focus of transactions is on linking business outlook and capacity to development and government initiatives. U.S. participants require special preparation to enter this marketplace if opportunities either for business or development for impact are to be realized.

9. From an AID perspective, focus on using development technology exhibitions as a vehicle for linking U.S. small businesses to developing country entrepreneurs appears to fit agency priorities and the AID role within developing countries.

10. U.S. small businesses can contribute--cost effectively--to development initiatives. Total cost of the Zimbabwe exhibitions to AID was \$250,000. Returns from business involvement (and then only in terms of benefits having a direct monetary value) indicate that these funds will be leveraged at a rate of about 25 to 1.

11. U.S. Pavilions within development technology exhibitions can be used to present a face of the U.S. not now often seen in developing countries. In areas where the current U.S. representatives tend to be

members of the development assistance community or perhaps employees of multinational corporations, the enthusiastic and creative approach of U.S. small business is a welcome addition.

The subsequent section of this paper will look more closely at the entire range of activity related to development technology exhibitions and design and implementation of U.S. Pavilions at such exhibitions. Writers of this document hope that this report will serve AID as a practical assessment of the Zimbabwe experience presented in a format which assists in the design and implementation of other such activities.

III. CONCLUSIONS AND RECOMMENDATIONS

INTRODUCTION

Development technology exhibitions which are regional in scope and encourage international participation, (such as the one which took place in Zimbabwe,) are expensive and demanding. At the macro level they require, for example, coordination of host government interests, national efforts (U.S. Pavilions) and individual exhibits, and development of complicated logistics for everything from crowd control to opening ceremonies. Both the Zimbabwe and Mexico efforts were more than a year in preparation: in both cases the skill with which the background work was done for the exhibitions as a whole had a great deal to do with the success of exhibitors.

U.S. Pavilions are groupings of U.S. exhibits, often around a theme, within these larger exhibitions. Activities related to assembling U.S. Pavilions to such development technology exhibitions require months of planning and preparation in order to bring exhibitors from all over the U.S. to work together in another country for one week. Moreover, as experience from both the Mexico and Zimbabwe development-focused exhibitions has highlighted, the job, from a development perspective only begins at the end of the exhibition. Exhibitors need to be able to call upon certain services in the weeks and months subsequent to the exhibition in order to bring initiatives which have development impact to fruition.

The U.S. participation in the Zimbabwe exhibition has involved work at all levels--overall exhibition design, U.S. Pavilion implementation

and exhibitor followup. Therefore, given the wide range of possible issues to be addressed in an assessment of experience with development technology exhibitions to date, writers of this document have identified what appear to be, from their perspective, particularly important categories for consideration by AID. Results of the interviews, exhibitor comments and the writers' perspectives are presented as conclusions and recommendations within these categories.

ASSESSMENT CATEGORIES

A. DEVELOPMENT TECHNOLOGY EXHIBITIONS

This category focuses on defining development technology exhibitions more clearly. Today there are many apparently related activities bearing titles such as trade show, trade fair and technology exposition. Along with these titles have come preconceived notions of what the activities which accompany them look like. A critical starting point for this assessment, therefore, is presentation of conclusions which clarify what differentiates a development technology exhibition from other related activities and provide some perspective on what this means to AID in operational terms.

CONCLUSIONS:

1. Development technology exhibitions are those which are focused on linking the products and know-how of business to host country development initiatives; these exhibitions use host country priorities to provide the framework for the types of exhibit and exhibitor chosen.

Without this clear focus, exhibitions lose their distinction from that range of other activities mentioned; they are then no longer within the purview of the U.S. development assistance program. Development technology exhibitions are those which have both business and development goals. Such exhibitions recognize the fact that in developing countries, where governments are either directly or indirectly primary markets for technology, those businesses which have technologies which can assist in priority areas will have the best chance for both doing business and having development impact.

In Mexico this distinction was not made clearly: only very general and broad guidelines concerning types of technology and exhibits expected were given to potential exhibitors. The result was lack of impact for the overall activity: a hodgepodge of mis-matched exhibits, exhibitor unhappiness, and inability to create a community of interest within the exhibitors themselves. The organizers of the Zimbabwe exhibition benefited from the Mexico experience. With some input in terms of concept from U.S. Pavilion designers, the organizers of the Zimbabwe activity worked to ensure that the development technology concept was adhered to. The result was an exhibition from which representatives of both community groups and business could benefit. It was an exhibition which resulted in U.S. technology finding its way into both government-sponsored development projects and host-country enterprises. The Voltaic participants, sponsored by AID, not only expressed satisfaction with the appropriateness of the exhibition and the types of technologies, but requested that a similar activity be held in Ougadougou.

2. Development technology exhibitions appear to work best as regionally focused activities with international participation.

Focus on a region or some other specific geopolitical grouping enables both clear definition of economic development and technology sector priorities and, therefore, better targeting of exhibitors to respond to these priorities. International participation is important: the presence of exhibitors and technologies from many countries makes attendance at the exhibition far more attractive to the countries sponsoring the activity, to the exhibitors and to the visitors.

In the case of Mexico, that country was simply the place where the exhibition occurred; no regional emphasis was attempted. In fact, in the Mexico exhibition any apparently "relevant" technology, with relevance defined by the company itself, was solicited. Most visitors were Mexican. Zimbabwe organizers on the other hand, clearly targeted RDT '82 to be relevant to the rural technology priorities set by the SADCC countries and invited participants on that basis. This resulted in better exhibits, broader representation from other countries, better government support, and a higher degree of exhibitor participation and satisfaction.

3. For the U.S., size of business and relevance of technology should be important factors in development technology exhibitions.

Many developing countries are already host to trade fairs and expositions of various types. International participants at such shows are usually large well-established firms. Such fairs make important contributions to the businesses and to the countries which participate. But they do not need nor should they have AID assistance.

There is however a wide gap in the availability to both the private and public sectors in developing countries of technologies which can be used to accomplish both economic goals and priorities in areas such as rural development, small business promotion, and employment of the handicapped or of tribal population. In some cases these are bridging technologies, or technologies which represent intermediate steps between the status quo and more advanced production approaches. In other cases these are so-called high technologies which can be manufactured using available skills.

Very often these technologies, as well as simplified approaches to their use, are in the hands of U.S. small businesses. And these small businesses, which tend to be creative and flexible (both qualities important to conducting long-distance business relationships) find it almost impossible to reach developing country markets.

Strong small business infrastructure is important to the U.S. as well as to the LDCs--for many U.S. small businesses growth markets are in developing countries. Because U.S. small businesses make natural partners for LDC enterprises, and because their approach to technology often is more directly usable in development contexts, U.S. participation in such exhibitions appears to address a key constraint by placing priority on small business participation.

In the Zimbabwe exhibition only two exhibitors were large firms-- Union Carbide and Arco. In both cases they were exhibiting products applicable to rural and development technology contexts but their exhibits were static. The excitement was created by the U.S. small businesses; for example by the principal of a solar energy firm who showed both rural community women and the former head of government how to solder and manufacture a seemingly complicated solar array. His message to them was that Zimbabwe can manufacture and export using his techniques.

4. Development technology exhibitions require different organizing approaches and skills.

- a. Development technology exhibitions must include a range of exhibitors, a number of whom will not be able to pay the fees. This means that the organizers must be able to raise funds from other sources or lose money. In the traditional approach used by professional trade fair

organizers, businesses which exhibit are charged a fee per square meter or foot of space; the fee is calculated to enable organizers to clear expenses and make a profit. The result of this approach is that the spaces go to businesses which can afford the fees. Usually, even in a U.S. fair, space and attendance costs are affordable only to larger firms; in the case of developing country exhibitions, with vastly increased travel expenses, the costs without subsidy are prohibitive to small firms.

The development technology exhibition held in a developing country to be successful in meeting both business and development objectives is going to have to involve both public and private sector exhibitors, some of whom will be unable to pay space fees. In practical terms this means that exhibition organizers must bear the expense themselves or become fundraisers in order to provide subsidies, e.g., for local development groups.

The Mexico organizers failed to provide sufficient subsidy to exhibitors, but they made money. Many development groups and small businesses were excluded. While the business impact of Mexico was acceptable, development impact was less so. The Zimbabwe organizers on the other hand arranged for subsidy: the result was an exhibition which was far more effective at linking business to development initiative. It was well attended by community groups, local development organizations and by small and large business. In the case of Zimbabwe, the organizers lost money but plan to try again in 1984 prepared to be better fundraisers.

b. Development technology exhibitions require new approaches to structure and design. In the traditional exhibition approach, exhibitors rent their space and organizers provide backup services. The challenge of a development technology exhibition, however, is to make things happen--to structure seminars, workshops and other activities to assist exhibitors to make the most of their time within the exhibition and in country.

In the case of the Mexico activity, the only working, technology exchange seminars held were inside of the U.S. Pavilion, which introduced a daily series of workshops and seminars hosted both by the exhibitors and by special guests. Without a doubt the seminars in the U.S. Pavilion were one of the highlights of Mexico for all exhibitors. The approach was subsequently picked up and used by the Zimbabwe organizers.

RECOMMENDATIONS

- AID should continue to participate in development technology exhibitions: such activities are useful vehicles for introducing technologies of U.S. small business to developing countries. Said one exhibitor: "These exhibitions are a must. You have to have government participation for LDCs--there's no other way to do it." Another exhibitor said, "If AID is going to introduce technology in development it should bring a U.S. company to do it."
- AID, for maximum cost effectiveness and development impact, should continue to sponsor U.S. Pavilions only within technology exhibitions which indicate by their design and approach that they are indeed development technology exhibitions.

- The conclusions and related issues discussed here should be used to establish criteria by which AID missions can decide whether or not to get involved in a particular exhibition.
- AID should continue to maintain a priority on sponsoring the exhibits of U.S. small to medium sized businesses and to encourage organizers of overall exhibitions to focus more on small business participation.
- AID itself is not and should not be the primary organizer of an internationally focused development technology exhibition. AID should sponsor all or part of such activities (for example, a U.S. Pavilion) only where a private firm has initiated and taken responsibility for the exhibition and where participation can be seen by AID as a way of carrying out its own programs in the region. Otherwise the time and expense of such efforts can be prohibitive.

B. CRITERIA FOR PARTICIPATION

The January-February 1983 issue of the Harvard Business Review carries an article by Professor Thomas V. Bonoma titled "Getting More Out of Your Trade Shows." While the article is not directly relevant to development technology exhibitions, it shows clearly that business also is plagued with questions related to analyzing and evaluating the benefits and costs of trade fairs. Bonoma's contribution is an approach to assisting companies to set criteria for their participation.

Bonoma points out that every show or exhibition has both "selling" and non-selling" objectives, and that both are of equal weight until given unequal value by the company in a given situation. (In fact, many businesses approach shows with only non-commercial objectives.) Bonoma suggests that the starting point for considering the value of a show to a company is targeting both sets of objectives thoughtfully in light of the constituencies which the company is trying to reach through the show. This information is then laid out in the form of a matrix, which then provides a framework for determining planning and measuring tools.

It is possible to take Bonoma's approach and apply it to a development technology exhibition; in this case one matrix might be filled in by the AID mission, another by each individual exhibitor. The following charts are offered as examples only and the categories are meant to be more illustrative than definitive. (See Figures 2 and 3)

The terms commercial and non-commercial are used to describe technology exhibition objectives because they seem to communicate somewhat more clearly, but the meaning of the categories is the same. Once these

CRITERIA FOR PARTICIPATION
IN
DEVELOPMENT TECHNOLOGY EXHIBITIONS
(EXHIBITOR PERSPECTIVE)

Market Constituencies	Commercial Objectives	Non-Commercial Objectives
LDC Private Sector	<ul style="list-style-type: none"> ● Make contacts ● Find joint venture partners ● Locate distributors ● License technology ● Sell products 	<ul style="list-style-type: none"> ● Undertake market intelligence ● Test products ● Determine local production capacities ● Define new application for technology ● Get company known
U.S. Government	<ul style="list-style-type: none"> ● Make contacts with <u>right</u> people ● Access to government funding sources ● Sell technology to government programs 	<ul style="list-style-type: none"> ● Notify government of ability to provide TA ● Test products
Host Country Government	<ul style="list-style-type: none"> ● Make contacts in right places ● Submit proposals by invitation 	<ul style="list-style-type: none"> ● Get company known ● Test products ● Access to political support

Figure 2

Handwritten mark

CRITERIA FOR PARTICIPATION
IN
DEVELOPMENT TECHNOLOGY EXHIBITIONS
(AID MISSION PERSPECTIVE)

Market Constituencies	Commercial Objectives	Non-Commercial Objectives
AID/Washington	<ul style="list-style-type: none"> ● Work U.S. business into relevant mission projects ● Leverage mission funds/input for more program dollars ● Save technical assistance costs by using business approaches 	<ul style="list-style-type: none"> ● Effect policy impact ● Contribute to agency priorities ● Provide private sector involvement models
Host Country Government	<ul style="list-style-type: none"> ● Increase U.S. investment ● Use U.S. technology in government development projects ● Determine technology needs 	<ul style="list-style-type: none"> ● Achieve political impact ● Show AID understanding of country development priorities ● Enhance image of U.S. private sector
LDC Private Enterprise	<ul style="list-style-type: none"> ● Offer U.S. technology/products ● Determine technology needs ● Stimulate joint ventures/licensing arrangements ● Locate prospects for private sector support 	<ul style="list-style-type: none"> ● Improve climate/opportunity for U.S. firms ● Promote long-term relationships

Figure 3

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these objectives are set, the company can decide how it wants to measure success--what results will indicate that objectives are being met. These indicators, if set before the exhibition begins, can be used by U.S. Pavilion organizers both to ascertain the readiness of an exhibitor to benefit from such exhibitions and to assist exhibitors to define how they should set their priorities in terms of time, recordkeeping, etc., while at the exhibition. Once the exhibition is over, these indicators and objectives provide the framework for evaluation.

CONCLUSIONS

1. Clarification of commercial and non-commercial objectives at both the exhibitor and AID mission levels at the outset of involvement is critical if results are to be evaluated effectively.

At the moment, articulating the range of possible non-commercial objectives poses particular difficulty when assessing results. This is a significant problem when trying to assess the effectiveness of an activity which, by its very definition, would appear necessary to have a number of very solid non-commercial objectives in order to justify AID participation.

2. Exhibitors that have articulated their objectives clearly are most likely to reach those objectives.

Based on interview responses and the pre and post exhibition interviews, there is a relationship between the amount of pre-planning done by a firm and the ability--and willingness--of the firm to tackle the difficult follow-through. One firm in the pre-interview stated the objective of developing three projects with a value of \$60,000 each. In the recent interview, it was clear that the representative of this

firm had targeted this objective and gone after it; now he is working with eight projects having a total value of about \$500,000.

3. AID missions must develop criteria for participation relevant to their own in-country program priorities.

AID as a primary actor is seeking to use a development technology exhibition as a means to reach certain constituencies. In order to determine value, AID (as the matrix suggests) must define the constituencies and objectives it wants to accomplish vis-a-vis those constituencies. Once this is done, AID, in conjunction with Pavilion organizers, will be in position to determine the steps it needs to take to insure that such objectives are realized.

Take a hypothetical example. In a matrix for Zimbabwe, AID might have shown investment by U.S. small business in Zimbabwe as a potential commercial objective. If the mission had then placed high priority on this objective, it might have wished to take special steps to ensure the availability of foreign exchange to back the deals made. (Indeed the Zimbabwe Mission Director and the U.S. Pavilion Director had such a conversation at the time of the exhibition. In the case of RDT '84, therefore, it is clear that such thinking will be done well ahead of time.)

RECOMMENDATIONS

- AID missions should be encouraged to complete an objectives matrix (or to use some other comparable tool) at the time the initial decision is made to participate in a development technology exhibition. Such an activity will enable clarification

of priority objectives, as well as assist the mission to set more specific targets and to determine actions needed to ensure that targets are reached.

- U.S. Pavilion organizers should spend time with mission staff to familiarize themselves with all AID programs and priorities. In this way the organizers will be positioned to provide better interface between the mission and exhibitors--before the exhibition and while that activity is in progress.
- Exhibitors should be assisted by Pavilion organizers--before participating in the exhibition--to state their own objectives in like format and to develop their own success indicators. This approach will assist exhibitors to clarify their thinking and to hone in on their priority targets for action and record-keeping while at the exhibition. The exhibitor-completed criteria matrix also provides organizers with an invaluable tool 1) for assessing a potential exhibitors' understanding of the developing country context and therefore readiness to participate; 2) for assessing impact at the end of the activity.

C. DESIGN OF U.S. PAVILIONS

In both the Mexico and Zimbabwe exhibitions, the same basic approach to the U.S. Pavilion was used. Essentially the concept behind the Pavilion was to present a cross-section of U.S. private sector businesses and development organizations interested in working with LDCs. In both cases, the U.S. exhibits were meant to generate excitement both from visitors and within the exhibitor group itself. Emphasis was placed on ensuring that the exhibitors and organizers formed a community of interest which could be seen--and felt--by visitors. Priority also was placed on recruiting exhibitors who could make action-oriented presentations of their technologies, both to small groups and to larger seminars as appropriate.

Section V₄ of this report contains more detail on the U.S. Pavilion.

CONCLUSIONS

1. U.S. Pavilions centered on action-oriented exhibits and on the presentations of entrepreneurs themselves are most appropriate for development technology exhibitions.

In any exhibition context, but particularly in a developing country location, the best exhibits are those which can be seen, heard and even felt. This approach was used to the extent possible both in Mexico and Zimbabwe with a great deal of success. In both locations, in fact, it was this--more than structure, design, etc.--which made the U.S. Pavilion, a star of the show. All of the exhibitors in Zimbabwe gave the U.S. Pavilion high marks for its "hands-on" approach. Organizers of the British Pavilion, which was polished, but more of an information-style exhibit,

concluded that their "exhibit next time should be more active" and that "the U.S. stand was popular and successful."

2. The most appropriate size and design for U.S. Pavilions appear to be those which enable visitors maximum opportunity to meet, mingle and discuss with 15 to 20 businesses and perhaps 4 to 5 nonprofit groups.

Both U.S. Pavilions were about 400 square meters; a space comfortable for the number of exhibitors quoted here. This exhibitor number itself appears to be a reasonable size to handle in terms of 1) creating enough activity within the Pavilion; 2) generating enough in total benefits and results to justify the overall activity and 3) providing both on-site and follow-through services.

In Mexico the U.S. Pavilion was rectangular in shape with exhibitors facing out on aisles from a central meeting area. The circular shape of the U.S. Pavilion in Zimbabwe proved to be an even better configuration. With a central walk-through and room for seminars and workshops, this design provided maximum opportunity for interaction. British organizers felt that the U.S. struck a better balance in terms of design. Interestingly the U.S. Pavilion, in terms of basic construction was very simple compared to that of the British stand.

3. U.S. Pavilions must provide on-site brokering and packaging services and maximum opportunity for the exchange of technical information and perspectives through seminars and workshops.

Before entering the Mexico activity, U.S. Pavilion organizers hypothesized that U.S. small businesses entering developing country markets for the first time would need special assistance in packaging deals. Events

both in Mexico and Zimbabwe proved this hypothesis correct: in both exhibitions, deals were initiated because this assistance was available.

In the case of one exhibitor from Mexico, a million dollar deal drafted well over a year ago at the time of the exhibit is still pending and likely to go through. In Zimbabwe, the presence of a broker enabled organizers to represent five technologies without company representatives (an experiment to offer other U.S. small businesses a way to sample the market without attending). One of these technologies was sold under a licensing agreement on-site by the broker in a deal valued at least at half a million. Exhibitors in Mexico and Zimbabwe stated that the presence of a skilled broker, to assist with drafting letters of intent, technology licensing, etc., was an important part of Pavilion activities.

The other valued aspect was the opportunity to participate in seminars and workshops relevant to their spheres of interest. The opportunity to meet in relatively informal working sessions with others who share interest in certain technologies or issues offers another whole dimension to exhibition attendance for both exhibitors and visitors. In Mexico, visitors came back several days in a row to participate in such workshops.

RECOMMENDATIONS

- U.S. Pavilions in terms of both design and function should be conceptualized by the organizers working on-site and closely as possible with the staff of the AID mission, the commercial attache, and other U.S. resources. Such individuals, because they are based in-country, have good perception of the interests and needs of key constituencies in terms of types of exhibits, timely seminar topics, acceptable Pavilion design. They also know of

individuals who can help make it all happen including the necessary publicity. In the case of Zimbabwe where an initial on-site visit was made, the coordination with in-country resources was much better than it was in Mexico. Now, however, with the experience of Zimbabwe added to Mexico, it is clear that even more can be accomplished on-site.

- Well-structured, well-publicized seminars and workshops should be continued as vehicles both for technology exchange and exhibitor/visitor satisfaction. All exhibitors rated seminars high as useful tools both for explaining and learning (thus doubling the potential for payback on attendance). In both Mexico and Zimbabwe the seminars were hampered by problems of coordination between proposed Pavilion activities and those scheduled for the exhibition as a whole. To overcome this problem, Pavilion organizers must spend even more time working with exhibition staff and developing structured seminars (admittedly a hard task when time is always short). In the opinion of the exhibitors, however, it's worth the effort.

D. APPROPRIATE ORGANIZATION

In undertaking to support U.S. Pavilions within development technology exhibitions, AID will have to make decisions concerning which organizations have the qualifications most needed to implement such activities successfully. While this question was not asked directly of the exhibitors, their perspective, which becomes clear in the overall nature of their responses to questions, is reflected in the following conclusions and recommendations.

CONCLUSIONS

1. The primary skill needed in the organization of U.S. Pavilions is the ability to conceptualize the effort as a collaborative venture-- among AID, the exhibitors, the organizers and host country participants-- and to design the U.S. involvement to ensure maximum benefits to its participants and its observers.

This is a critical point. There is a tendency to assume that the major skills needed for U.S. Pavilion implementation are logistical in nature. While moving people and exhibits successfully is an extremely important part of such activities, it is, in the case of a development technology exhibition (and particularly in a well organized one such as Zimbabwe) a secondary skill. Of paramount importance is the contractor's ability to design and implement the U.S. Pavilion as a special kind of business and development project which can achieve returns on the investments of time and money made by AID, the participants and the host country sponsors.

2. Key staff involved in structuring U.S. Pavilion activities must have strong intermediary and brokering skills, familiarity with both

profit and non-profit development related programs and a track record in technology transfer activities.

A major portion of the Pavilion organizers' activities, both on-site in Zimbabwe (and to a lesser extent, in Mexico) and in follow-up work still being done by the writers, was spent assisting exhibitors 1) to package their products and their technology capacity for involvement in development projects, 2) to think through a variety of possible introduction channels for their technology given the nonavailability of foreign exchange funds, and 3) to open doors in various agencies for introduction of their technologies. Having the ability to assist exhibitors with all these aspects of introducing technology to developing countries is critical both to exhibitor satisfaction and to the achievement of full impact from exhibition activities.

3. The implementing organization must be willing to commit to working with exhibitors on a wide range of follow-through activities.

The ties forged in working together on Pavilion activities are strong; more importantly, they form a solid foundation for continued interaction. Exhibitors require continued access to what are becoming more commonly known as intermediary services. In response to a question asking what types of assistance they are going to need to develop good international markets, 8 out of 10 of the businesses contacted requested help setting up appointments in Washington; an equal number expressed interest in receiving assistance with locating LDC contacts. Since the end of the Zimbabwe activity, U.S. Pavilion organizers have provided a number of services to exhibitors visiting Washington, including opening doors to key

individuals in embassies, writing telexes, finding out who to talk to in relevant government agencies and providing assistance with writing funding proposals.

RECOMMENDATIONS

- U.S. Pavilions within development technology exhibitions should be organized and managed by small, private sector firms having the capacities and skills mentioned here. The approach of small, for-profit firms is one of trying to do more with less: this kind of expertise is needed to assist exhibitors to leverage their attendance into definite results.
- A relatively small sum of money should be added to the contract for the U.S. Pavilion to enable the organizers to provide follow-on services. While direct grants to the businesses themselves would be out of order, the fund could be used by the organizing firm to leverage much larger sums.

For example, at least four of the Zimbabwe exhibitors need to have someone take a trip back to Zimbabwe on their behalf and work for a month or two to push project activities along to fruition. While each business could not pay the whole bill, each could pay a representation fee; the fund would pay the rest. Again some such approach was discussed briefly with the AID/Zimbabwe Mission Director just after RDT '82. For the mission, already busy with a full complement of activities, being able to work with and rely on the organizers for follow-through support is a definite plus.

E. BUSINESS MIX

The focus of U.S. Pavilion activities in Zimbabwe (and Mexico) was upon small business (not to the total exclusion of larger businesses). This decision was made because 1) the emergence of a strong small business infrastructure is a high priority for both AID and the host country and 2) those U.S. small businesses having technologies relevant to host country priorities cannot afford to get to this market without AID support while larger businesses can.

Based on this approach issues can be raised as to the "value" of the small business focus. There are conclusions to be drawn on the significance of the contributions made by smaller businesses, as well as other conclusions related to the roles for big business and development organization partners in the exhibition activity.

CONCLUSIONS

1. The focus on small business will continue to be most appropriate both from an AID and host country perspective.

Most of the AID missions and host countries have very active small enterprise development programs. In many of these countries AID has placed program priority on assisting the strengthening of the small business support institutions which in turn work with many small enterprises. A critical need on the part of these host country institutions is for access to U.S. technology and to venture partners who will work with their client enterprises. AID, to the extent that it is assisting outreach to relevant U.S. technologies, is providing back-up support to other of its program efforts.

2. To get their technologies into developing country markets, small businesses are willing to take a long-term view.

All the businesses interviewed for this assessment reported emphatically that their participation in the exhibition provided them with personal knowledge of the local scene; this is critical to their ability to "stick out" what already are turning out to be complicated deals. The fact that all the exhibitors are continuing to pursue deals resulting from the exhibition bears this out. In addition, seven of ten firms reported they felt Zimbabwe was important to their firms if they could work through the trouble spots.

The advantage to the U.S. government here is that these businesses are not receiving funding to cover this negotiating and long lead time: they are out trying to do business and to learn how to do it at the same time.

3. Small businesses are flexible in terms of work with host government.

When asked if the fact that governments, or public sector institutions, within LDCs are the major buyers and creators of demand presented difficulties for them, five said "yes," while the other five felt it depended on the situation. The most interesting fact, however, is that of the five who said there were difficulties, four felt that the problem was not with government but with their own lack of skill at working with government. U.S. small businesses, the interviews suggest, are quite willing and eager to work with developing country governments--if they have access to the skills of an intermediary to assist them with the process.

4. U.S. small business, in the opinion of the exhibitors themselves, can contribute much more to developing countries than sale of products.

When asked if their technologies had major contributions to make in assisting countries to earn foreign exchange, all ten of the business exhibitors interviewed replied "yes" and continued on to offer examples. When asked if they could contribute in other ways, the exhibitors again all agreed and offered examples of involvement ranging from designing training programs to developing markets for paper pulp.

5. Larger businesses already active in the country, region or perhaps just in a given technology area can play a role in development technology exhibitions by assisting small business.

In countries where entry of U.S. corporations is particularly difficult due to wariness on the part of the country or to restrictive taxation which discourages business, it may be wise policy for large U.S. businesses to enter the country by sponsoring linkages among smaller businesses, thereby assisting the development of needed infrastructure. In the case of Zimbabwe, Chase Manhattan provided some funds to assist with follow-through because they are looking at models for assisting U.S. small businesses to enter markets in other countries. This is not to say that a large business having a relevant technology should not participate in a development technology exhibition but it acknowledges the fact that a better form of participation in a development technology exhibition--for most large businesses--is sponsorship of smaller businesses or of support activities.

6. Development technology exhibitions should include non-profit development organizations which produce relevant technologies or possess skills needed in target areas as part of their business mix.

In a developing country context, many of the linkages between business and development efforts must be made between small enterprises and communities. Many of the development organizations with headquarters in the U.S. offer services and even technologies which assist the formation of needed linkages at this level. In addition, staff of these organizations also interact extremely well with government ministries and other host country entities and can provide additional assistance to the small business exhibitors who do not have this skill.

RECOMMENDATIONS

- U.S. Pavilions should maintain the current business mix--2 to 3 large businesses, 15 to 20 small to medium business, 4 to 5 development intermediaries and several support people. This mix represents a good cross-section of the U.S. private sector active in developing countries.
- Priority should be placed on recruiting businesses which make it clear that their long-term goals are not export oriented but are instead focused on forms of investment, e.g., local manufacture, in the country.

F. TECHNOLOGY MIX

Another critical decision area pertains to the technologies which should be represented at such exhibitions. In Mexico, the decision on which technologies to highlight in the U.S. Pavilion was made after reading government reports and talking to businesses and individuals with Mexico experience. In the case of Zimbabwe the technology mix for the U.S. Pavilion was decided after a visit to that country by a select team of individuals. It was the task of this team to determine the priorities and technology needs of both private and public sector entities. In both exhibitions the decision was made to limit the size and scope of the technologies represented in the U.S. Pavilion to a few priority areas.

CONCLUSIONS

1. The decision on technology mix for the U.S. Pavilion is best made by reviewing relevant documents (such as AID's Country Development Strategy Statements and government development plans) and by interviewing relevant development groups, private enterprises, business support groups, government ministries, and, of course, AID mission staff.

This approach, which was used in Zimbabwe with some success, has a number of advantages. First, conversations with private and public sector representatives build interest and are a form of advertisement for the activity. Second, this type of interaction provides a base from which to define specific enterprise opportunities of interest to potential U.S. partners. Third, when this approach to exhibition design is used, the AID mission can use the interface mechanism offered by the organizers (e.g., in terms of interviewing host country organizations or reaching

into the U.S. private sector) to assist with bringing added resources to their own project initiatives.

2. The majority of technologies presented should be ready for production and the marketplace.

There may be some instances where an R&D technology is considered particularly appropriate for display. Both the Mexico and Zimbabwe activities featured several technologies in R&D stages. In Zimbabwe these technologies were included because they appeared to have particular relevance to the area and because Zimbabwe has the productive capacity to handle them. In general, however, technologies still in R&D stages present particular problems in terms of transfer and certainly they mean an even longer lead time before impact can be realized.

3. Technology exhibits should not compete against each other in a development technology exhibition.

In a traditional trade fair where space is sold to any business, it would not be unusual to find a number of exhibitors displaying very similar products located very near to each other. The focus of the development technology exhibition is on getting small businesses involved in the country, rather than upon having them compete with each other for resources and contacts.

4. Concentration on a specific number of technology areas is the best approach.

While there is available a broad range of technologies useful to developing countries the U.S. Pavilion cannot hope to provide access to all of them. It is best to target recruitment and follow-through activities

to several key sectors. This approach enables organizers to work more in-depth in certain technology areas and to prepare better in terms of background work and follow-up.

RECOMMENDATIONS

- Decisions made regarding the technology mix for a U.S. Pavilion should be made in-country by the designated Pavilion organizers and representatives of the AID mission.
- The majority of technologies represented should be ready for production. Any R&D left to be done should be that related only to final adaptation to local markets.

G. EXHIBITOR SELECTION AND PREPARATION

Decisions on technology and business mix are the first filter in the exhibitor selection process. In the case of Zimbabwe, still other filters were decided upon: businesses would have to indicate that they had the ability to follow-through, that they were interested in models for long-term investment in the region (joint venture, etc.) and that they would be represented at the exhibition by a principal of the firm empowered to enter into deals. Finding exhibitors who could meet these criteria was the next challenge--and a significant one.

Once exhibitors were selected for Zimbabwe much of the contact between the organizers and the participants revolved around negotiating levels of financial support and getting shipments made on time. In addition, however, organizers provided two services. The first was a guide prepared for exhibitors titled "Doing Business in Africa." Essentially this booklet, prepared in easy to follow language, was a distillation of the myriad of reports and booklets which exhibitors would have had to look at separately in order to find comparable information on doing business in any one of eight African countries.

The second service was preparation of technology packages for exhibitors. Each package contained a description of the technology and its possible applications, recommendations as to which countries might be most receptive to the technology, etc.

CONCLUSIONS

1. Recruitment of appropriate businesses to attend development technology exhibitions requires specialized approaches.

While direct mail may be efficient for ordinary trade fairs, direct mail, even to special lists, does not work for development technology exhibitions. For the Zimbabwe exhibition, over 6,000 brochures were sent to a targeted mailing list. A smaller mailing went to A.T. International's own list. The aim was to spread the net wide to enable as many businesses as possible to express interest. The brochure prepared for the exhibition and sent with the mailing gave the location of the exhibition and set forth exhibitor criteria. Total expression of interest received by the organizers out of all mailing activity was about 50 applications. Of the 50, a good number then were excluded from consideration simply because it was obvious they did not fit the selection criteria.

2. Recruitment of the businesses for a development technology exhibition requires a rifle-shot, rather than a shot gun approach.

Businesses must be recruited on an extremely targeted basis: the purpose of the effort is not to invite all businesses, but to find and invite the few whose outlook, long-range business interests and technology best match with needs in the host country. Organizers of the U.S. Pavilion learned the hard way that recruitment is best done by the organizer directly through personal contacts with relevant industry associations, small business associations, other business people. In addition, personal contact between the organizers and potential exhibitors is critical. For example, at least five of the businesses represented in Zimbabwe attended the exhibition because of prior interaction with or knowledge of the organizers. Three-quarters of the exhibitors had barely heard of Zimbabwe and made their decision to attend based on lengthy conversations with the organizers.

3. Descriptive materials taken to the exhibition by U.S. Pavilion participants are better received if prepared with developing country clients in mind.

Most small businesses entering developing country markets for the first time have few ideas concerning how to market their technology. First of all they have trouble defining appropriate constituencies for their technologies. Second they have insufficient knowledge of the area to enable them to put together the kind of material which shows LDC clients how to work with their technologies. Exhibitors need assistance with preparing this material. Exhibitors in Mexico and Zimbabwe did not receive such assistance (again time was a major factor) but there is no doubt in the minds of the organizers that better targeted materials would greatly increase exhibitor effectiveness, particularly in terms of development impact.

4. The preparation of technology packages is considered a valuable service.

All businesses interviewed felt that the technology packages were useful, the majority feeling that such packages gave them both a marketing tool and more credibility. In addition, these technology packages were very well received by the business people who visited the U.S. Pavilion.

5. Exhibitors need to receive as much information on the country or area as possible before attending the Exhibition.

Most of the exhibitors had barely heard of Zimbabwe; much of what had been heard was negative. While attendance at the exhibition generally worked in favor of the country, the exhibitors expressed the need to learn as much as possible and felt that relevant information would increase their effectiveness.

RECOMMENDATIONS

- Organizers of the U.S. Pavilion should provide assistance to potential exhibitors with preparing publicity materials designed to assist the companies to market their technologies in a developing country context.
- Organizers should keep a steady flow of information on the country or region going to those businesses selected to attend.
- Technology packages should be prepared for every exhibitor.
- Business recruitment should be based on selection criteria developed during the design phase.
- Final selection of exhibitors should be based on personal conversations with the potential exhibitor.

H. SUBSIDY COSTS AND LONG-TERM PAYBACK

Fifty thousand dollars of the \$250,000 AID made available for RDT '82 was funneled to exhibitors in the form of small-grants. Not all grants were of the same size; none was more than \$5,000.

The provision of grant assistance to small firms was begun with the Mexico exhibition. The businesses, which the organizers were recruiting for TFTP, were finding it difficult to raise funds for the trip. At this point, the organizers decided to use grant funds to subsidize the exhibitor's expenses.

There have been questions raised by some concerning the wisdom of providing "free money" to business. A better way to look at the grant, in the eyes of at least one exhibitor, is as an investment by the U.S. government in U.S. small business. Another exhibitor made it clear that in his view the receipt of the grant/subsidy is actually a quid pro quo offered to small businesses in return for the fact that they are going to have to wait--and work--for a long time without payback.

The implied questions in this category appear to relate to the wisdom of giving subsidy of any form to business.

CONCLUSIONS

1. In the case of development technology exhibitions, questions pertaining to the "fair" use of subsidies are essentially red herrings.

When the term subsidy is used many assume that there is a fund to be tapped which must be made available to all equally. Also assumed is that many businesses will fit the bill. In reality there are relatively few businesses who will match the selection criteria in any given instance. When one such business is found, Pavilion organizers want to be sure that

this particular business gets to go. The process is not a contest for funds but a very selective mechanism for setting up specific linkages between U.S. and LDC enterprise.

2. Assistance provided to small businesses perhaps would be better thought of as Contracts for Services.

Such contracts are made with potential exhibitors to assist them to visit potential LDC market locations, to undertake market assessment activities while there and to report results in some defined way to the Pavilion organizers. This is in essence what small businesses do at development technology exhibitions. For example, when asked to place a dollar figure on the value of the market intelligence gathered, most exhibitors replied that it was invaluable. One particularly thoughtful answer, however, was "the amount it would cost me to hire someone for a year to do a lot of digging and background work." Under a contract for services arrangement, some of that information would come back to the organizers and sponsors in exhibition reports.

3. Exhibitors feel that subsidies of some type are well justified and are small when compared with the long-term investment required on the part of the small business.

Interviews with exhibitors indicate very clearly that they are aware of the fact that the deals they are monitoring may take another year or more to bring to fruition. When asked how they would justify the costs of the subsidy to AID, the exhibitors came up with a list of reasons. Among them:

- Small business is an important part of foreign policy.
- It is a good investment for the U.S.

- Small businesses would not go otherwise and going is absolutely necessary to get the job done.
- Response is so slow and hard and payback is so far away, that small businesses with major cash flow problems couldn't afford to go.
- If the U.S. doesn't push, the LDCs will pick up their technology from the French, Japanese, Germans and Koreans.

4. Investment made by the U.S. companies in terms of time and effort far exceeds the dollar value of any subsidy received.

The subsidies provided covered only a portion of airfare, per diem and shipping expenses, particularly to Zimbabwe where airfare alone is \$2,500. The businesses themselves must cover salaries and a myriad of costs related to both on-site activity and necessary follow-through. A conservative estimate of the cost of participation to a small business ranges anywhere from \$10,000 to \$20,000.

RECOMMENDATIONS

- o The provision of subsidies to small business for partial costs of attendance should be continued. It is a viable mechanism for use in expanding the involvement of U.S. business in technology activities.
- o The subsidies should be approached as contracts for service, which are given by the organizing firm to exhibitors in an effort to get things done. In this way exhibitors would be agreeing with the Pavilion organizers to provide certain support services in return for partial subsidy for attendance. It would be a good business-like arrangement with advantages to both sides. For example,

businesses would not have to provide receipts, etc. but would be obligated only for the reports stipulated in the contract.

I. FORMS OF INVESTMENT

From the outset of AID involvement with development technology exhibitions, it has been clear that one critical need is to define more clearly 1) the ways in which development technology exhibitions lead to longer-term investment by U.S. business in developing countries and 2) the forms this investment takes.

CONCLUSIONS

1. Development technology exhibitions do lead to significant results in straight business and investment terms. In volume alone, Zimbabwe is expected to generate close to \$6 million dollars worth of activity.

At the moment, this figure is speculative, since the exhibition has been over for only four months and many initiatives are in their early stages. But it is clear from even this rough tally that significant business transactions in the form of license arrangements, distributorships, direct sales and joint ventures are in process.

2. Participation in development projects is a major avenue for U.S. small business investment in developing countries.

While on-site at the exhibition, U.S. participants were visited by representatives from most of Zimbabwe's Ministries. The Ministers extended invitations to the U.S. entrepreneurs to participate in projects being launched by their Ministries. It did not take the U.S. businesses long to realize that a major channel for their technologies is through such government projects. Today no fewer than 10 exhibitors are working on development projects having a total value of \$3.2 million.

3. Perhaps the most important investment is a personal commitment made by entrepreneurs to the country and to the individuals with whom contact was made.

When asked if it were easier to understand and sympathize with problems faced by Zimbabwe business people because of personal contact, all the exhibitors responded affirmatively. One Zimbabwean businessman who purchased a license from a U.S. business not represented at the exhibition traveled to California two weeks after the exhibit to meet with the owner of the U.S. business. In that case what began as a licensing agreement now appears to be headed toward a joint venture, with the U.S. businessman planning a trip to Zimbabwe. It will be months before deals such as this one can be consummated. Meanwhile, however, there is an evolving personal interaction and growing respect which will keep the effort alive.

RECOMMENDATIONS

- More preparation needs to be done before the next exhibition to prepare exhibitors for the forms of long-term investment that are possible. It is particularly important to familiarize exhibitors with the ways in which their technologies might be used in development projects. To the extent that they understand the basics of how such projects are put together, they are able to interact more successfully with government visitors, etc.
- Organizers of the U.S. Pavilion should spend time with each exhibitor, familiarizing themselves in-depth with the technologies represented. In this way, organizers know which people to steer to to the exhibits and can assist exhibitors to determine which projects are feasible.
- Exhibitors should be encouraged to arrive at the exhibition site several days early--to see and feel the country, to meet together

with organizers in several formal sessions to discuss the country/region priorities, the government structure, the investment potentials. At this point, representatives of both the U.S. and local business and government communities should be invited to speak to exhibitors. All of these activities will result in the exhibitors having far more capacity to take advantage of opportunities.

- Pavilion organizers must be prepared to stay in the area for up to a week after the end of the exhibit. In many cases exhibitors will have made contacts which should be followed up on right away if they are to eventuate. In some cases the exhibitor should be encouraged to stay as well. But a post exhibition interview with each exhibitor and adequate follow-up immediately by the organizers can make a difference in the impact of the entire exhibition.

J. OTHER BENEFITS

For some months now everyone concerned with development technology exhibitions has felt strongly that a range of benefits exists which far exceeds those usually calculated in terms of dollars in sales and potential deals, etc. However such benefits have not been delineated very carefully.

Since defining these benefits more clearly is quite important for 1) enabling AID, the exhibitors and the organizers to set criteria and targets for their participation and 2) assessing the full development impact of such activities, some conclusions as to the nature of such benefits will be made here based on the Zimbabwe experience.

CONCLUSIONS

1. There are significant technology exchange benefits which can occur in conjunction with development technology exhibitions--and they occur at various levels.

Eleven out of the 13 exhibitors contacted for this assessment reported that they learned about other technologies. Four exhibitors reported that they were able to define new applications for their technologies. And just as significantly, three exhibitors reported that the exhibition has been significant because they had been able to confirm the need for their technology.

Technology exchanges occurred at other levels as well. A small tin cooking stove was given by one of the U.S. exhibitors to a rural entrepreneur who was to make it and test it in his area. One of the U.S. development organizations represented in the U.S. Pavilion sponsored a workshop in which a Tanzanian demonstrated manufacture and use of a kiln fired in

waste oil. Rural women from Botswana (whose attendance was sponsored by A.T. International) made beer for exhibitors and learned how to make and use solar food dryers.

How does one "measure" all of this? It certainly would not be cost effective to trace all the interactions but there were many of them throughout the exhibition.

2. Attendance at a development technology exhibition has a major impact on the first-time exporter's ideas regarding the demands and potentials of international business.

All but one of the small businesses attending the exhibition reported that their ideas concerning work in developing countries had changed, and that these new ideas were going to lead to shifts in their marketing plans. Interestingly, the phenomena here seems to be that along with the realization of how tough it is to do business, there comes the feeling that it can be done. This is the type of outcome that is possible only after an exhibitor has lived and worked in a location so that the place becomes a known rather than an unknown. Once a country becomes known, working there also becomes possible.

3. Educational benefits are significant--for the exhibitors and for those who attend.

Perhaps the greatest single and most important learning was the discovery, by at least half of the businesses that in order to enter developing country markets they would have to adopt "a turnkey approach rather than just a product." Another exhibitor commented that this realization had caused him to change his strategy "to focus more on financing and

and funding schemes; if you can help the local company get financing you've made the sale."

Two of the firms from the U.S. Pavilion felt they learned that barter might be a feasible solution for them. Several of them stated that attendance at the exhibition had in essence been a great course in international marketing.

Perhaps the comment which best reflects other types of learning comes from the exhibitor who said, "Now we can go back and make the rest of the world aware of Zimbabwe's potential for technology use."

4. There are definite political and goodwill benefits to development technology exhibitions.

All exhibitors were asked if they felt there was political value to the U.S. in having expanded interaction between U.S. and LDC small businesses. All responded "yes." Again the comments were most interesting; one exhibitor felt that political value was gained through private sector to private sector interaction because LDC small businesses could see what market potential they have."

Another exhibitor commented that in his view the development technology exhibition would work because "you have to have a combination of free enterprise and a little bit of commune to make things work here." Finally, one exhibitor summed up by saying that the political value was in "sharing technology to build basic infrastructure through the free enterprise system: not giving aid but making people self-sustaining."

5. Working in close proximity with small businesses enabled the U.S. development organizations represented at the Exhibition to define additional ways of interacting with business.

6. The realization that their products are only a piece of what LDC enterprise needs and is looking for can have far-reaching impact on a company's realization of its business potential both in the States and in developing country markets.

The majority of the U.S. exhibitors went to Zimbabwe to present products; they returned with a perspective on their companies and on how they and their technologies could be part of solutions to problems in developing country contexts. This change in perception is evidenced in a number of ways; for example by the fact that at the end of the exhibition participants were able to see more clearly how their company could provide technical assistance services in development projects and how they could contribute to schemes for easing foreign exchange problems.

While not all companies will be able to capitalize on this understanding, for those who chose to use it, it can mean the key to success in entry into LDC markets and to work with both U.S. and host country development assistance organizations.

7. The market intelligence benefits are significant for small companies.

As reported earlier, most exhibitors felt that this was too valuable to place a dollar figure upon it.

RECOMMENDATIONS

- Organizers of the next U.S. Pavilion should use the preliminary thinking on this subject done here, as the basis for 1) working with exhibitors to define criteria for participation and 2) developing a pre and post interview questionnaire to be used at the next such exhibition. If the criteria and questionnaires are

designed effectively, they should function effectively as tools which actually enables quantification and tracking of previously hard-to-pin-down results.

K. EXHIBITORS TALK ABOUT FOLLOW-THROUGH

All the exhibitors have expressed a need for follow-through support. Rather than to talk in terms of conclusions, then, this section will present only the recommendations made by exhibitors:

- Set-aside a portion of the Commodity Import Program for small businesses: funds now appear to be syphoned off by larger firms.
- Encourage AID to consider the use of the products of U.S. small business in projects they fund.
- Make available soft loans and seed money for demonstration projects with business leading to larger projects on a commercial basis.
- Promote minority firm representation more aggressively.
- Provide the services of an intermediary to assist with funding proposals.
- Enable teams of exhibitors and/or their representative to get back to Zimbabwe to do needed follow-up with government and business.

IV. HISTORICAL PERSPECTIVE ON DEVELOPMENT TECHNOLOGY EXHIBITIONS

Technology for the People Trade Fair #1
Geneva, Switzerland
September 1980

The Technology for the People Trade Fair was held in Geneva, Switzerland, in September 1980. The fair took its name from Technology for the People, Inc., a firm incorporated specifically for the purpose of designing and implementing these fairs.

The Technology for the People Trade Fair was billed as the first activity of its kind to feature technologies appropriate to developing countries. Organizers of the fair planned to hold fairs every year, with the fair to move every second year to a developing country location.

The approach used by the organizers to structure and implement the trade fair was essentially the same as that used in more "traditional" trade shows. Space was sold to those who wished to participate; brochures were sent out to a selected mailing list announcing that the focus of the show was to be on technologies for developing countries. Aside from some very general lists of technologies, no other guidelines were provided to potential exhibitors.

Organizers of this activity did make some departures from accepted trade fair procedure. They enlisted support from the United Nations for a series of seminars held in conjunction with the overall activity. The purpose was to bring together government types and business thinkers to discuss key issues in panel presentations attended by exhibitors and visitors. The seminars dealt with a wide range of business and development

issues, e.g., Third World reaction to the export of developed country technology.

Some effort was made on the part of the organizers to raise additional funds to sponsor groups from developing countries, but this attempt was largely unsuccessful. The majority of the exhibitors were from developed countries; the range of technologies broad.

AID participated in that show, with Department of Commerce assistance, by putting together an exhibit consisting largely of published materials.

While the writers of this document have not seen a thoughtful written analysis of the first Technology for the People Trade Fair, it is not difficult to define what must have been at the very least a significant constraint to trying to use relatively traditional approaches to insuring funding and gaining recognition.

Essentially, most trade fairs are organized with a certain industry in mind; thus the trade fair itself has a client base and the exhibit space is purchased by businesses relating to that industry in some way or another.

To the extent that appropriate technology had a client base, at the time of TFTP #1, it was government. But governments, and particularly, the development assistance programs of government, were not familiar with nor did they know how to use trade fairs as viable mechanisms for furthering their appropriate technology programs. Trade fairs were a tool far more familiar to the private sector, most of which had adapted a healthy wait and see attitude regarding appropriate technologies which had not as yet proved themselves in the market place.

In essence, then, TFTP #1 organizers were faced with the need first to market the trade fair concept and only if successful at that could they sell the space. It was a tall order.

To a large extent, it appears to these writers that TFTP #1 finally "worked" and was even relatively successful for two major reasons:

- 1) The Geneva location meant that there was a lot of support available to get things going, a lot of government representation easily available and nearby so that costs were not prohibitive even for a new, unknown type of effort.
- 2) Everyone involved in any way with so-called appropriate technologies was intrigued by the idea of a trade fair highlighting appropriate technologies. No one quite knew how to relate to the idea; on the other hand no one wanted to be insensitive and non-supportive.

Therefore, while organizers of the Geneva fair and participants considered the effort relatively successful (AID visitors recommended further participation) much of its success was because of the circumstances surrounding the effort and the attraction of the idea rather than to the ability of the organizers to put together a fair which could be used by participants to build bridges between business and development.

Technology for the People Trade Fair #2
Mexico City, Mexico
November 1981

The second Technology for the People Trade Fair was designed and implemented very much along the lines of the Geneva effort. The focus on appropriate technology was changed somewhat and billed as technology for development; the UN was again prevailed upon to sponsor a seminar series; space was made available at a price of \$140 per square meter (a real deterrent to small business and development groups).

The nature of U.S. participation changed significantly, however. With support from AID's Private Enterprise Bureau, A.T. International's Business and Technology Services Department designed an approach to a U.S. Pavilion which it was hoped would enable the U.S. offering to have impact, even if the organization of the overall exhibition was less than completely successful. AID made \$60,000 available, and A.T. International provided \$150,000. Smaller amounts were raised from OPIC, Control Data, John Deere and Caterpillar.

It was during the preparation for participation in TFTP #2 that the concept of the development technology exhibition began to emerge. The organizers of the U.S. Pavilion reasoned that the Pavilion to be successful would have to sponsor businesses which could link into Mexican development priorities, for example, in the areas of rural industrialization, small enterprise promotion, food processing, agricultural implements and so on.

The organizers also began to define the types of business, selection criteria, types of activities, etc. which would in effect guarantee a U.S. Pavilion within which something always would be happening, whether

a one-on-one transfer of information from a U.S. entrepreneur to a visiting entrepreneur or a meeting of 10 or 15 individuals interested in a certain technical area. To all of this, organizers added experts in the art of doing business internationally to work both with other U.S. exhibitors and visitors.

TFTP #2 itself was not a great success, particularly in development terms. The location was bad; the logistical support worse. Publicity was handled ineffectively and the seminars were (as one could have predicted) of very little value to any one but the experts who attended them. Most of the exhibits featured businesses and technologies which no feat of the imagination could have linked to a development context.

The U.S. Pavilion, however, was a great success on three levels:

- 1) It accomplished what it set out to do in terms of offering visitors and other exhibitors alike the opportunity to interact with a cross-section of U.S. private sector types. The Pavilion was a community of various types of relevant expertise which invited people in and provided a good atmosphere for doing business.
- 2) The exhibitors within the U.S. Pavilion were very successful both in terms of straight business deals (worth \$3 million or so at the time of the devaluation of the peso which put them on hold) and in terms of linking into development efforts (at least five of the exhibitors were invited to participate in government-funded projects).
- 3) The U.S. Pavilion had tremendous positive impact on both the organizers of TFTP #2 and upon the organizers of the Rural

Development Technology Exhibition scheduled for Bulawayo, Zimbabwe in September 1982. In the latter case the U.S. Pavilion in Mexico played an important role in assisting the Zimbabwe organizers to solidify thinking re the shape and character of that activity.

At the conclusion of the Mexico fair, U.S. Pavilion organizers submitted a list of recommendations to the Technology for the People staff. The major recommendation made was to suggest that, based on the success of the U.S. Pavilion, the best organizing approach for a development technology exhibition, if TFTP #3 were to be billed as such, would be to apply that used on a smaller scale within the U.S. Pavilion.

Rural Development Technology Exhibition
Bulawayo, Zimbabwe
September 1982

In the Rural Development Technology Exhibition held in Bulawayo, Zimbabwe in September 1982, the organizing approach for the entire exhibition was modeled closely upon that set by the U.S. Pavilion in Mexico.

Exhibitors were asked by the organizers to gear their exhibits to regional development priorities: background information on the countries and their priorities was provided by the organizers. Subsidies were provided to development organizations and community groups. Seminars were organized around the skills of the exhibitors and designed to involve them rather than to talk around issues.

No further details on the exhibition need to be provided here, since both RDT '82 and the U.S. Pavilion are discussed more specifically in the following sections.

Both RDT '82 and the Pavilion were working within the concept of a development technology exhibition as outlined in this paper. Neither proceeded without snags nor managed to make the most of every opportunity. That will be possible only as concepts and methodologies are refined and sharpened even further in subsequent efforts.

But both RDT '82 and the U.S. Pavilion which functioned within it succeeded in linking business initiative to development opportunity in ways which lead to impacts which are identifiable in both business and development terms.

V. PROFILE OF RURAL DEVELOPMENT TECHNOLOGY '82

Zimbabwe was chosen as the site for the Rural Development Technology '82 exhibition because of its growing role as the commercial center of the southern African region. The organizers felt that the nine countries which make up the Southern African Development Coordination Conference (SADCC)* share common goals, problems and approaches to rural technology needs.

The majority of the exhibits adhered to the theme of development through rural technology. There were 130 exhibitors which were made up of government agencies, commercial enterprises, PVOs and other development organizations. The following 16 countries were represented:

Africa (6)

Botswana
Lesotho
Malawi
Tanzania
Zambia
Zimbabwe

Developed World (10)

Belgium
Canada
Denmark
France
Germany
Greece
Italy
Sweden
U.K.
United States

* the nine countries which make up the SADCC are: Angola, Botswana, Lesotho, Malawi, Mozambique, Swaziland, Tanzania, Zambia and Zimbabwe.

The exhibit hall was filled and there were 35 exhibits and working demonstrations on the grounds outside the main building. Over the 5 days which the exhibits were displayed, it was estimated that 15,000 people passed through the exhibit hall. These included delegations from each of the SADCC countries, President Banda, Prime Minister Mugabe and most of the Zimbabwean Ministers, a delegation of Ministers and officials from Kano State, Nigeria, the British and Greek High Commissioners, the DCM and Commercial Attache from the U.S. Embassy and AID Mission Director Roy Stacy. Many Zimbabwean businesspeople attended and large numbers of farmers and rural people were bussed in from outlying Districts.

The exhibit organizers were successful in encouraging the European Economic Committee (EEC) to help the SADCC countries to subsidize the cost of their participation in RDT '82. Of the nine SADCC countries, Angola and Mozambique did not exhibit (although they did participate in the country seminars) and Swaziland cancelled out due to the death of King Sobhuza II.

Zimbabwe's official exhibition was coordinated by the Ministry of Lands, Resettlement and Rural Development and included all of the ministries and parastatals concerned with rural development. For the most part, these exhibits were well-conceived and relevant to job creation and small scale technologies for rural areas.

From the commercial sector, there were five Zimbabwean firms which were promoting windmills, pumps, water lifting and storage, ventilated pit latrines and building bricks. In addition, there were five Zimbabwe PVO exhibits.

The exhibits of the remaining five SADCC countries were "official" and varied in quality. Botswana's display created the most interest with its small scale technologies primarily from the AID-funded Rural Industries Innovation Centre.

From the developed world, there were four "official" government-sponsored exhibits--France, Germany, U.K. and U.S.A. Of these, the British and American exhibits were the most impressive.

The West German exhibit was organized by the German Appropriate Technology Exchange (GATE). Their approach was to tell a story of the role of appropriate technology in rural development through a sophisticated series of written word and graphics. The exhibit was small and did not lend itself to attracting visitors.

The French exhibit was organized by ADEPTA, the government association for the promotion of technology exchange in food production and agricultural technology. The exhibit was poorly designed--a row of booths, side by side and manned by dour-faced Frenchmen who did not seem to mind that they were not attracting visitors.

The British exhibit covered an area of 350 square meters (second largest after the U.S. Pavilion) and displayed the theme, "British Technology for Rural Development." The exhibit was coordinated by ITDG/ITIS and consisted of 18 organizations, half of which were commercial enterprises and the other half were non-profit institutions. The display of materials was presented in story board fashion with emphasis on the written word. Equipment and machinery were exhibited for information value with little emphasis on marketing the products.

Half of the commercial enterprises brought representatives with them. One enterprise, sold a fish smoker and a grain cleaner and had discussions with a Zimbabwean firm regarding licensed manufacture of their products.

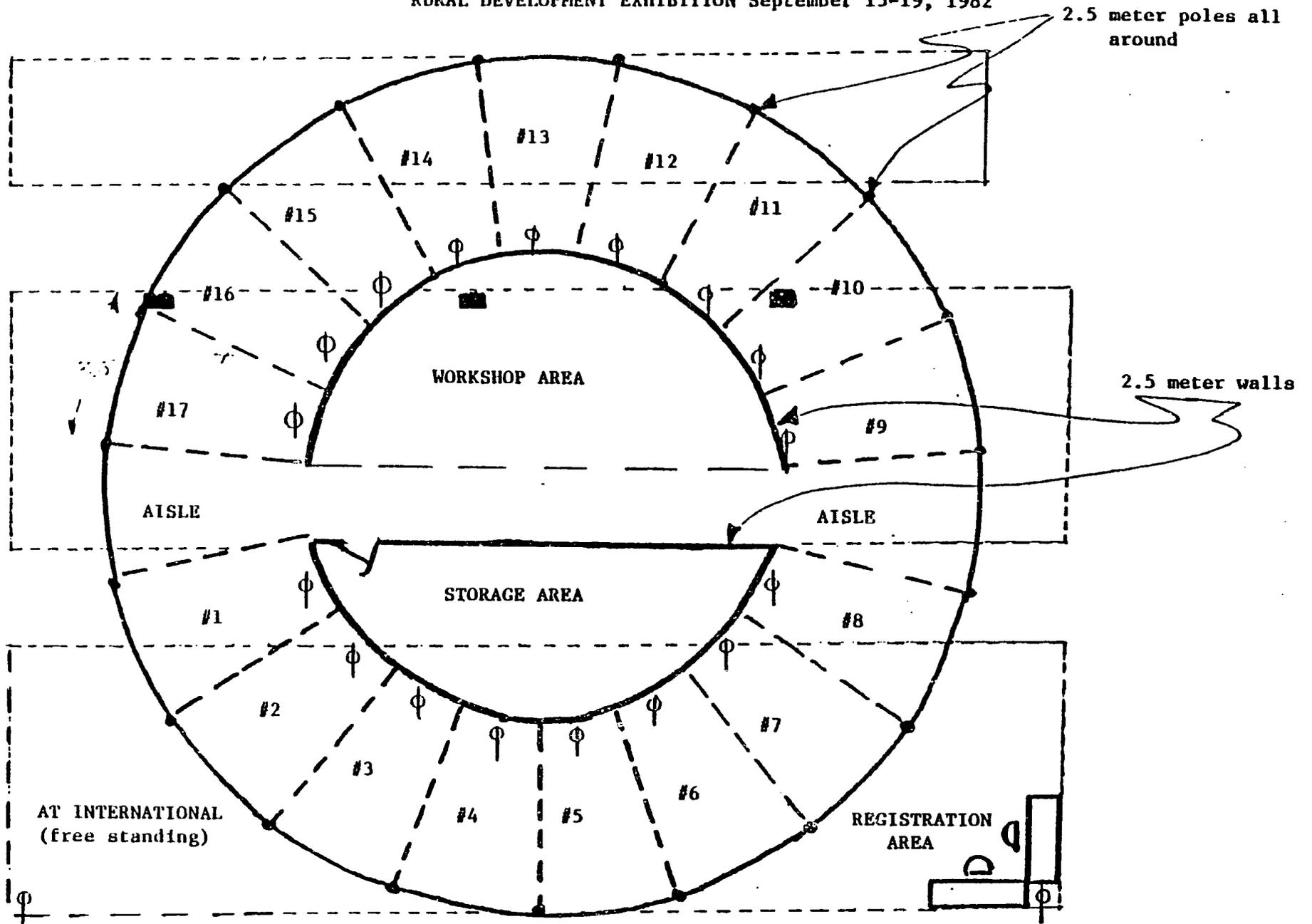
VI. PROFILE OF U.S. PAVILION

A. STRUCTURE

The U.S. Pavilion was sponsored by AID, A.T. International and Chase Manhattan Bank. AID contracted with A.T. International to coordinate and manage the U.S. Pavilion. AID's contribution was \$250,000 (\$150,000 from the Africa Bureau and \$100,000 from the Bureau for Private Enterprise).

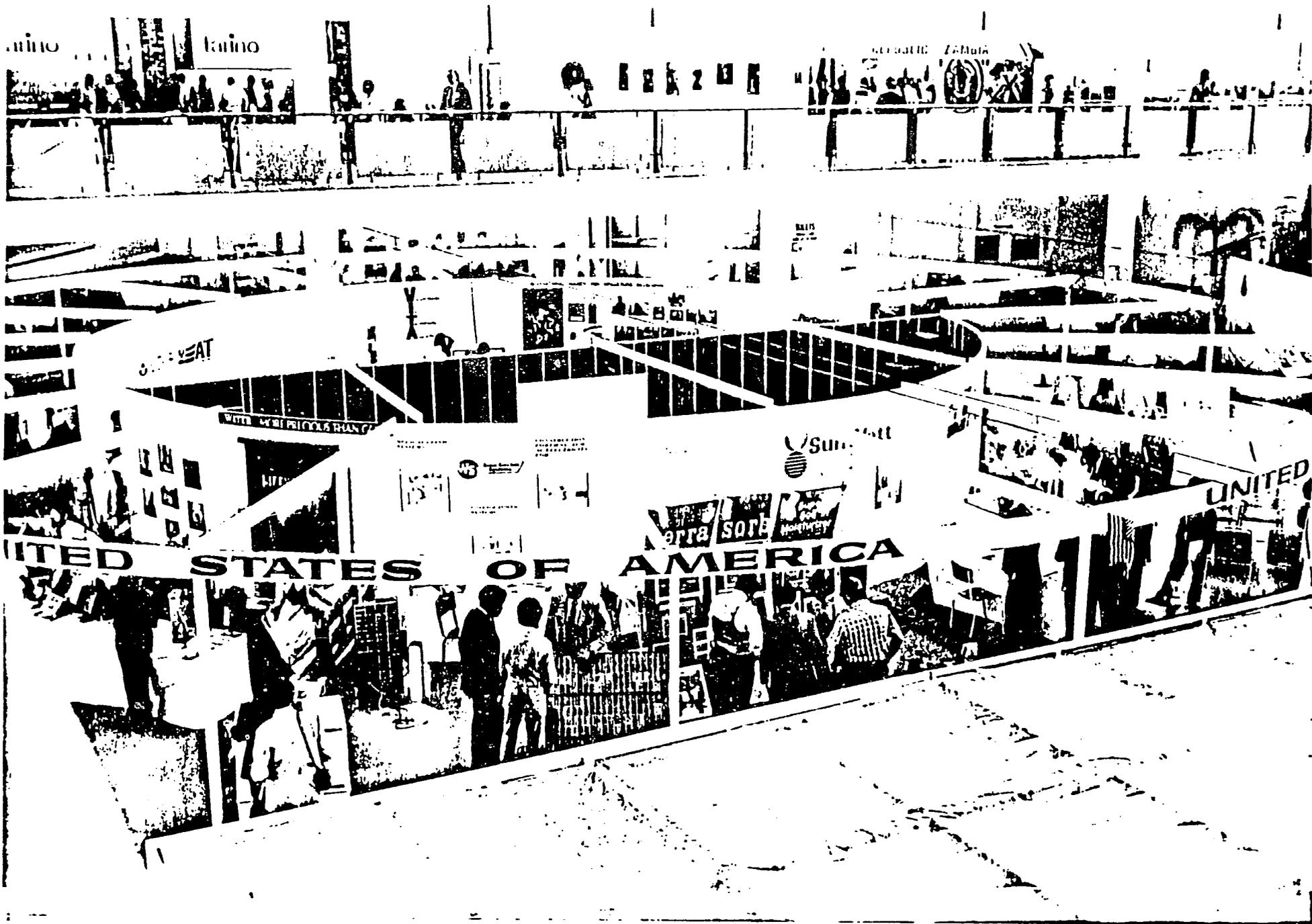
The U.S. Pavilion covered a floor area of 400 square meters and was the most striking in appearance upon entering the exhibit hall. The structure was circular in shape (see floor plan on following page) with 17 of the exhibitors situated on the outer circumference of the circle. A passageway through the center of the circle led to other exhibitors, a quiet discussion area and an internal room where workshops and slide presentations were held. The entire exhibit was painted white with blue painted floor. The words, United States of America, were printed around the top border of the exhibit interspaced with American flags. Most of the exhibitors had their company logo hand painted against the white backdrop which gave a very professional look to their display area.

.S. ILLINOIS PLAI
 RURAL DEVELOPMENT EXHIBITION September 15-19, 1982



⊕ = ELECTRICAL OUTLETS

APPROXIMATELY 23 METERS IN DIAMETER



B. OVERVIEW OF EXHIBITORS

1. Private Sector

Industrial Services International, Inc. (ISI) is the manufacturer of TERRA-SORB super absorbent polymer used in the agriculture, horticulture and forestry industries. Through use of this technology, water is held in the soil around plant roots, thereby protecting plantings from drying out. TERRA-SORB is of particular use in drought-prone areas, or where a constant water supply is a problem.

Western Solar Refrigeration, Inc. is a small company which manufactures a photovoltaic powered refrigerator/freezer (4 cu. ft.) and water pumping systems for remote sites of the Third World. Six of their refrigerators are presently being tested in various countries (including People's Republic of China) under a World Health Organization program promoting alternative energy sources for the refrigeration of pharmaceuticals in remote areas.

Gamwell Turbine Technology has invented an innovative energy-efficient bladeless turbine which is in the R&D stage. This turbine can be used for many applications and can be manufactured in the Third World.

Sun Watt Corporation assists qualified investors and manufacturers to set up production facilities for the fabrication of photovoltaic power systems, solar cell modules and high grade solar cell wafers. Sun Watt also manufactures and distributes standard lines of photovoltaic modules and provides customized solar cell arrays and systems.

AVL International manufactures high quality, high volume production handlooms which are well-suited to cottage industry enterprises. In order to get around the problem which some Third World customers may have in obtaining sufficient foreign exchange to purchase the loom, AVL will consider accepting woven fabric (in lieu of hard currency) which it will market in the U.S.

Solar Electronics manufactures communications systems for use in remote areas, beyond the reach of conventional telephone and power lines. These systems offer many advantages, such as energy independence, easy on-site assembly and custom design. Solar Electronics also provides consultation, design and training services in communications and alternative power applications throughout the world. In addition, Solar Electronics distributes portable communications systems, photovoltaic modules, wind generators and inverters.

General Technology, Inc. is a research and development firm which manufactures a small hydraulic press. The Hydra-Press is activated by pressurized steam which can be produced by various decentralized energy sources. The press is used for diecutting of leather, sheet metal and other materials.

Northern Counties specializes in housing construction which utilizes a pressurized wood treatment which gives it long life. They design low-cost, pre-fabricated houses which are adapted to local conditions and culture.

International Trans-American Corporation is a consulting firm which provides technical assistance to the Third World in the fields of agriculture, aquaculture and horticulture. Also, International Trans-American Corporation represents companies engaged in the production of implements and equipment appropriate for improving farm systems in developing countries.

Commerce Group, Inc. is made up of a group of professional farmers who undertake all aspects of agricultural and horticultural project design and implementation. They also broker and sell used and reconditioned American farm equipment and implements.

Silopress, Inc. manufactures a mobile cattle feed and grain storage system. The Silopress compacts material into a prefolded heavy duty polyethylene bag for storage and processing. This low-cost system is much more efficient, flexible and economical than the traditional silo feed storage system.

Arco Solar Industries manufactures solar cells for decentralized, rural applications. Examples are: water pumping, lighting, refrigeration and communication systems. In Zimbabwe, Arco Solar is represented by William Smith and Gourrock, Ltd.

Blue Sky Water manufactures small wind-generated water lifting pumps for small wells in rural areas.

Bowjon International, Inc. manufactures windmill/airlift water pumping systems designed for irrigation and other rural applications. Their system is characterized by simplicity of installation and maintenance, and by a flexible configuration which allows the windmill to be located up to one mile from the wellhead.

Domestic Technology International, Inc. develops, manufactures and markets low-cost and efficient renewable energy and food processing products throughout the world. Products include metal stoves, solar ovens, food/vaccine cold storage systems, solar desalination/distillation units, solar food dehydrators, grain storage units and photovoltaic water pumping systems.

2. Non-Profit Organizations

Life Water Systems is a non-profit organization which assists the local poor to develop water purification systems. Life Water provides engineering assistance for the drilling and installation of new wells as well as for the repair of existing water systems.

International Agency for Agriculture Development (IAAD) is a non-profit organization which provides technical assistance and educational training on beekeeping to young people in semi-arid areas.

Partners for Productivity (PFP) is a non-profit voluntary organization which provides management and credit training, investment loans, technical assistance, and vocational training in areas of agricultural and entrepreneurial development.

Volunteers in Technical Assistance (VITA) is a non-profit organization which works with local groups, businesses and entrepreneurs to develop technologies relevant to the needs and conditions of specific countries or regions. VITA has helped to develop fuel-efficient cookstoves in Africa's Sahel, solar devices in Mali, small scale farming methods in Nigeria and low-cost building materials for refugees in Somalia.

Appendices:

- Questionnaire: Exhibitors
- Questionnaire: PVOs
- U.S. Pavilion Brochure
- Directory of U.S. Products
and Technology for Africa (cover)
- RDT '82 Newsletter
- Photographs of U.S. Pavilion

RDT EXHIBITION: EVALUATION FORM

Here we'd like to get a picture of your firm, as it was prior to RDT 82 and as it is now, Please note any changes, and tell us why they came about. (This information will not be widely distributed; our purpose is to demonstrate to AID that their support for these efforts yields results.)

Pre-RDT 82

Post-RDT 82

- | | Pre-RDT 82 | Post-RDT 82 |
|---|------------|-------------|
| <p>A. Size of your firm</p> <ul style="list-style-type: none">- gross sales- number of employees- number of products- number of subsidiary operations <p>B. Type of export involvement</p> <p>C. <u>Interest in involvement in developing countries</u></p> <ul style="list-style-type: none">- high- medium- low <p>D. Type and amount of actual involvement in developing countries</p> <ul style="list-style-type: none">- contacts- operations <p>(here we'd like general information, the number and depth of your contacts, not specific names)</p> | | |

AP

Specific Results from RDT 82

A. What contacts did you make? With whom (developing country businesses, government agencies, other exhibitors, etc.)? How many are still "live" or open in some way? Please list each contact separately. (Use additional sheets as necessary.)

Person/Business contacted _____

Nature of interactions _____

Results _____

Person/Business contacted _____

Nature of interactions _____

Results _____

etc.

B. What actual deals have come out RDT 82 -directly or indirectly? Have you signed any contracts or made any sales? Are there negotiations in progress you expect to be completed soon? How have your negotiations been affected by foreign exchange problems? What are you doing about these problems? Be as specific as possible.

Specific Results from RDT/Zimbabwe

- C. What results came from the Exhibition that surprised you? What "serendipitous" or unexpected results have there been?
- D. Did your participation in the Fair provide you with insights into doing business in Africa? Do you find it easier now to understand and sympathize with problems as they arise? Is having a personal "knowledge of the situation" important to your ability to "stick out" what might be a complicated business deal before it comes to fruition?
- E. Do you view Zimbabwe as a potentially important country for your firm? If so, what kind of marketing assistance, in your opinion, would be of most value to you?

Which of the other SADCC countries appears to be most important to your firm? Why? What kind of entry to the other SADCC countries did the Zimbabwe exhibition provide for your firm?

- F. Benefits of exhibition attendance usually tend to be measured in terms of the dollar value of deals made. This is of course one measure, from your perspective as a small business, are there other benefits which you feel should be pointed out to agencies considering sponsorship of such exhibitions? For example, educational benefits? Technical exchange? Etc. Be specific.
- G. Did you learn of other technologies of interest to you? Did you define new applications for your own technology?

Future Plans

- A. In general, how have your ideas toward working in developing countries changed as a result of your participation in the Exhibition? Have your marketing plans changed, or have you hired additional staff?
- B. Have you selected target countries or regions of the world?
- C. What types of assistance could you use in order to develop an international market?
- providing you with information on potential developing country markets?
 - setting up appointments with key development organizations in Washington?
 - finding appropriate contacts in developing countries?
- D. What kinds of additional support would you like to see coming from the AID Mission in Zimbabwe?
- E. ~~How~~ that you/^{know}more about Zimbabwe and needs in that country, are there specific ways you feel that your company, or even individuals in your company can contribute to development projects in the country?

Perspectives and Recommendations

- A. One potential benefit of development technology exhibitions is to provide businesses such as your own with a far more concrete sense of the value and role of their technologies and products in certain countries, regions, and even LDC markets in general. Using your Zimbabwe experience as an example, can you place a dollar (\$) figure estimate on the value of such information to your company?
- B. Do you see U.S. small business as able to contribute even more to developing countries? If so, how, and what is needed, in your opinion, to make it all happen?
- C. Do you feel development technology exhibitions provide a useful vehicle for introducing technologies to developing country markets and that AID should continue to provide support to such activities?
- D. Do you feel your technology has a major contribution to make in assisting developing countries to earn foreign exchange? If so, why and how? Local manufacture? Cottage industry? Jobs?
- E. Most firms represented at the Zimbabwe exhibition received some form of partial subsidy. In your view, what is the justification for such subsidy? In other words, how would you argue in favor of having such subsidies continued?
- F. In many developing countries government or public sector institutions are the major buyers of and creators of demand for technology. In your view does this fact present specific difficulties for small business? Specific opportunities.

G. The U.S. Pavilion as meant to be a microcosm of the U.S. private sector as it is interested in working with LDCs. The attempt was to create a action-oriented, hands-on, interactive atmosphere — much like the U.S. itself. It was felt that this presentation made by entrepreneurs themselves would be more effective than a exhibit. To what extent do you feel the U.S. Pavilion succeeded? Do you feel this is the right approach? What recommendations would you make to any organization putting together a U.S. Pavilion for another exhibition?

H. Many developing countries do not use the U.S. approach to the market system. In your view is there political value to the U.S. in having expanded interaction between U.S. small business and LDC enterprises?

Date _____

Interviewer _____

RDY Exhibition -- Zimbabwe Followup
Non-Profit Development Organizations

1. Size of Organization
2. Nature of Business (what does the organization do?).
3. Primary operations in LDCs and services provided?
4. Did the organization already have programs underway in the country before attending the exhibition? If no programs, what types of interaction had taken place between the organization and in-country groups?
5. Your organization was invited to attend the exhibiton in Zimbabwe because it seemed that your potential for building solid and ongoing relationships in Zimbabwe was high. What, if any, specific program relationships evolved -- directly or indirectly -- from your attendance? Please supply some detail as to nature of the project and, if possible, place a dollar value on it.
6. Did attendance at the exhibition with representatives of the U.S. business community provide you with insights/perspectives on the role of business in Zimbabwe/Mexico? On the ways in which your organization could work with businesses?

7. From your perspective as a development organization, what roles do U.S. small businesses have to play in developing countries in general, perhaps working with organizations such as your own?

8. The U.S. Pavilion was an effort to present a microcosm of the U.S. private sector through an action-oriented, hands-on, give and take. (Example: there were seminars and workshops and an emphasis on action-oriented rather than static exhibits.) In what ways do you feel that the U.S. Pavilion succeeded best? What recommendations would you make to any organization putting together a U.S. Pavilion for another exhibition?

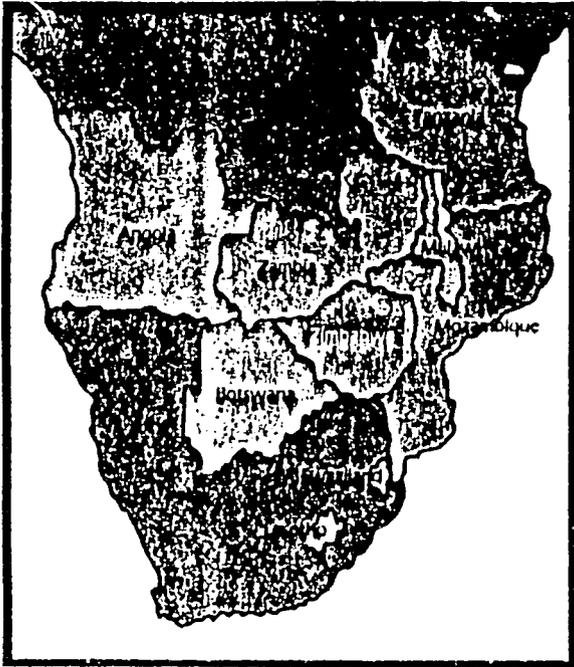
9. In your view and from your knowledge of Mexico/Zimbabwe are there political values to be accrued by the U.S. from sending representatives of small, rather than big, business? Yes or no, and why?

10. Benefits of development technology exhibitions can be measured in terms of the dollar value of deals made -- in the same way trade fairs are measured. However, these exhibitions are meant to introduce representatives of the U.S. private sector with technologies and services appropriate to the country. From your perspective, then, what are the other potential benefits which you feel could be pointed out to agencies considering sponsorship of such exhibitions? For example, educational and technical exchange benefits?

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ABOUT SADCC

SADCC, the Southern African Development Coordination Conference, includes Angola, Botswana, Lesotho, Malawi, Mozambique, Swaziland, Tanzania, Zambia, and Zimbabwe. These countries, with a combined population of roughly 50 million people and foreign trade totaling \$11 billion per year, created SADCC in 1980 as a mechanism through which to enable economic and technical cooperation among the members. While the SADCC countries have diverse economic and political systems, they share the common goal of attracting foreign investors and stimulating trade and commerce within the region.



ABOUT A.T. INTERNATIONAL

Established in 1977, A.T. International is a private, non-profit corporation created in response to a mandate from the U.S. Congress to "promote the development and dissemination of technologies appropriate for developing countries."

A.T. International works directly with organizations involved in aspects of technology development and small enterprise in over 30 countries. Through its Extension Services Program, A.T. International supports and learns from field efforts to adapt and commercialize technologies, through its Policy and Communications Services Program, A.T. International seeks ways to use this knowledge and perspective to widen the impact of appropriate technology approaches.

A.T. International's Business and Technology Services Program promotes the diffusion and commercialization of appropriate technologies by increasing the flow of U.S. private sector assistance to Third World enterprises. The participation of the U.S. business community may include technical assistance, marketing agreements, and financing (grant, loan or equity).

A.T. International views appropriate technology products and processes as tools for development when their use results in jobs, income, and an improved quality of life for lower-income populations.

The U.S. Pavilion at Rural Development Technology 82



AT
INTERNATIONAL

RURAL DEVELOPMENT
TECHNOLOGY 82
U.S. PAVILION
BULAWAYO, ZIMBABWE
SEPTEMBER 15-19, 1982

1724 Massachusetts Avenue, N.W., Washington, D.C. 20036

Bulawayo, Zimbabwe
September 15-19, 1982

THE INTERNATIONAL EXHIBITION

The Republic of Zimbabwe, one of Africa's newest and richest countries, will host **Rural Development Technology 82** from September 15-19, 1982. This international exhibition will draw business people, government officials, rural development groups and private citizens from Zimbabwe, eight of its African neighbors and the major industrialized nations of Western Europe and North America.

The exhibition's emphasis is on technologies and services which apply to rural development, a priority task of Zimbabwe and most of the southern African nations. Bulawayo, a large industrial and commercial center located along major rail, road and air routes in western Zimbabwe, will be the site of this year's exhibition.

The Exhibition of Rural Development Technology will provide:

- an opportunity for marketing products and technological processes that make economic use of natural resources and meet the needs of countries within the region;
- a forum for the exchange of knowledge and experience;
- on the spot opportunity for negotiating sub-contracts and joint venture agreements, and exposure to new markets and new products.

Rural Development Technology 82 is geared to respond to the economic policies and technology interests of the government of Zimbabwe and the other countries of the Southern African Development Coordination Conference (SADCC). Representatives of each country are scheduled to present their countries' technology needs, priorities and policies. Discussions on various technologies—food processing, alternative energy, water delivery systems, etc.—will take place within the exhibition hall.

THE U.S. PAVILION

The U.S. Pavilion is sponsored by the United States Agency for International Development (USAID). AT International has been asked to serve as host and coordinator for all U.S. Pavilion activities.

The theme of the U.S. Pavilion is **Rural Development through Creative Technology Applications**. Activities and exhibits within the U.S. Pavilion will be chosen to respond to the rural development technology needs voiced by business, development and government leaders within Zimbabwe and the SADCC countries. The U.S. Pavilion seeks to present a range of technologies and techniques which fall broadly within the categories listed here.

Production capacity in Zimbabwe is high. Businesses there are eager for access to new methods and cutting edge technologies which make use of that capacity. The U.S. Pavilion will present innovative technologies which respond to this demand and thereby directly facilitate increases in employment and income, particularly in the rural areas.

Space within the U.S. Pavilion is free of charge to small businesses new to exporting and new to these African marketplaces. Other businesses will be charged at cost only. Outside space is available for an additional fee.

Technologies and Techniques . . .

For Village Life—systems, technologies and products which can be used by family, village and cooperative units to improve the quality of life.

- Rural Communications
- Water Lifting
- Low Cost Sanitation Systems
- Water Storage
- Agricultural Equipment
- Rural Transport

For Resource Use—technologies, products and services designed to maximize use of abundant natural resources.

- Irrigation
- Wind Generation
- Micro Hydro Systems
- Bio Mass
- Hydrovolleys
- Reforestation

For Rural Production—systems, technologies and products for increasing rural self-sufficiency through production opportunities.

- Seed Improvement
- Food Processing
- Agricultural Equipment
- Interposed Farming Systems
- Fish Farming

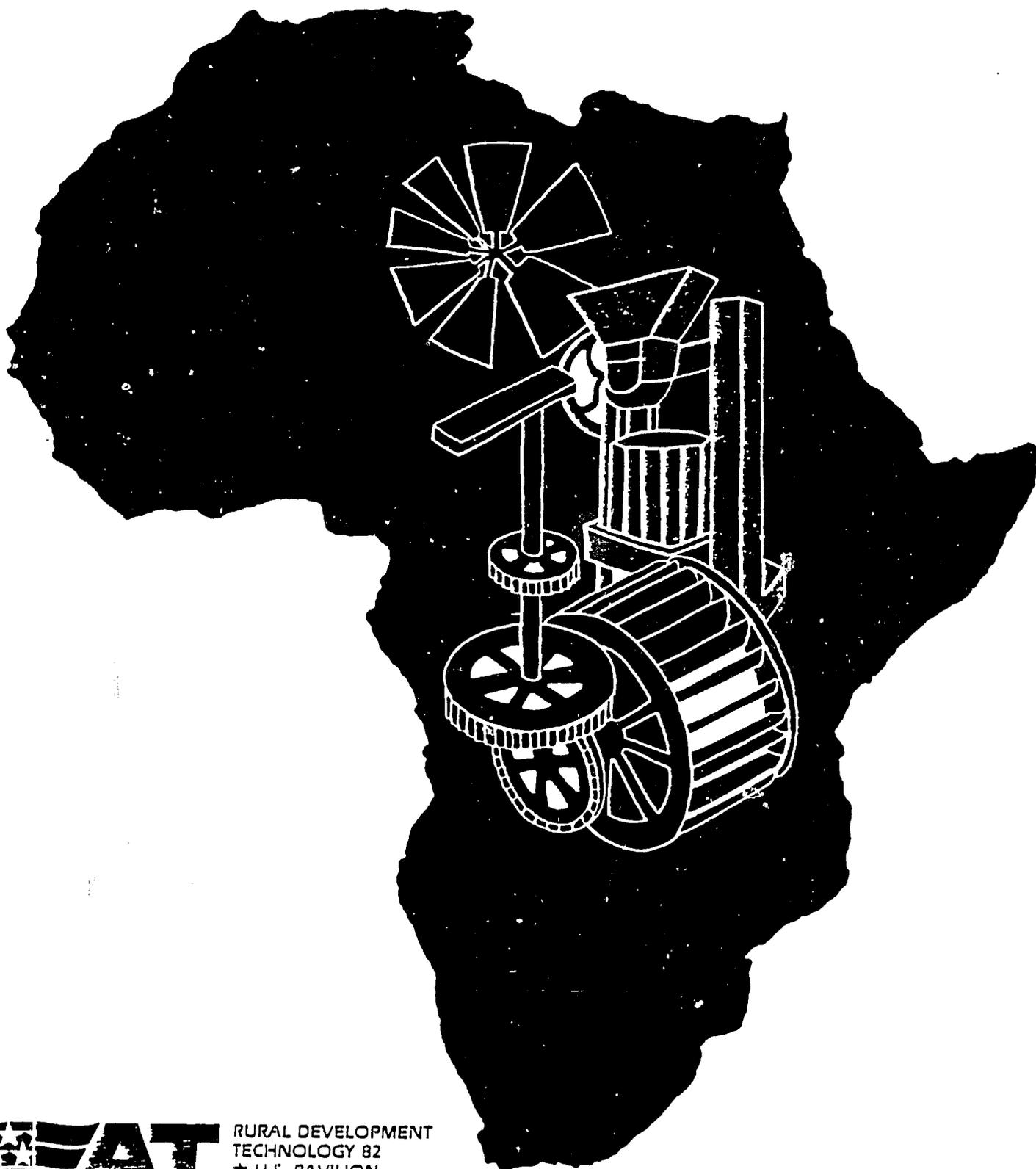
ABOUT ZIMBABWE

Zimbabwe, a country of nearly 400,000 square kilometers and 7.5 million people, became independent in April 1980. Elections that year brought the present Prime Minister, Robert Mugabe, to power. Zimbabwe has an impressive industrial economic base with western investments in mining, manufacturing, iron, steel, chemicals and textiles. Possessing a solid transport infrastructure, it is considered a country with excellent prospects for real economic growth and development in the next decade.

The government of Zimbabwe places high priority on rural development and the problems of rural unemployment. Zimbabwe is a net exporter of food crops but has major needs related to agricultural development, particularly for smaller farms in rural areas. Zimbabwe's principal agricultural products include tobacco, maize, wheat, rice, sorghum, barley, groundnuts, sugar, oranges, bananas, tea, coffee, soya beans and pyrethrum. Major government initiatives are planned in the areas of road building, dryland settlements, irrigation schemes, credit programs and agriculture. Tax breaks are provided for industrial and trade investment in rural areas.

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DIRECTORY OF U.S. PRODUCTS AND TECHNOLOGY FOR AFRICA



RURAL DEVELOPMENT
TECHNOLOGY 82
★ U.S. PAVILION
BULAWAYO, ZIMBABWE
SEPTEMBER 15-19, 1982

Rural Development Technology Newsletter

July 1982

International support for Africa's first-ever Rural Development Technology Exhibition

Organisations from 22 countries have already booked space at Rural Development Technology 82. They are as follows: Belgium, Botswana, Canada, Denmark, Egypt, France, Greece, Holland, India, Japan, Lesotho, Malawi, Nigeria, Sri Lanka,

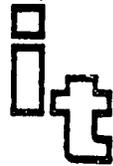
Swaziland, Sweden, Tanzania, UK, USA, West Germany, Zambia and Zimbabwe. (See the latest list of exhibitors for details.)

Over 130 companies are represented at the show so far. A total of over 200 are expected. Anyone wishing to join

this first time event should contact the organisers at the appropriate address as soon as possible... inside and outside space is still available at the time of going to print.



adepta



Reflecting the importance the international community attaches to this first-time event in Africa, official support is confirmed from: The EEC (CID), France (ADEPTA), United Kingdom

(ITIS), United States (AT), West Germany (GATE) and Belgium (OBCE). These groups alone have taken over 1000 square metres of exhibit space. Any companies wishing to join their

respective national groups should either contact the organisers or the coordinating organisation mentioned. See inside for further details on international and SADCC support

President to open Exhibition

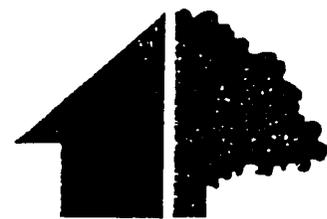
HE The President of Zimbabwe Rev The Hon Canaan Banana, Patron of the RDT Exhibition, has kindly consented to open the Show on Wednesday 15 September. The opening day of the Exhibition and Seminar will be designated Zimbabwe Day. The focus that day will be on the exhibits of the Zimbabwe Government Ministries as well as on the many companies from the private sector in Zimbabwe.

In his special exhibition message, the President said "My Government places enormous emphasis on the elevation of living standards in the rural areas where most of our people live... Zimbabwe is proud to be hosting this exhibition which is for the benefit primarily of countries in the SADCC region who share our commitment to rural development as the primary means of attaining our stated economic goals."

The President is well-known for his enthusiasm in encouraging all kinds of community development throughout the rural areas in Zimbabwe. He has shown a close personal interest in the arrangements for the



Exhibition and the Seminar and has welcomed the wide international interest which it has aroused.



**Rural Development
Technology 82**

The International Exhibition
of Rural Development
Technology
Showgrounds Bulawayo
Zimbabwe
15-19 September 1982

Patron:
His Excellency the President
of Zimbabwe
Rev the Hon Canaan Banana



AVL International

PRODUCTION OF LOOMS FOR COTTAGE INDUSTRY
PRODUCTION OF QUALITY TEXTILES
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