

Description: The present invention comprises an apparatus and method for digitizing an analog signal and optimizing the dynamic range of the digitized signal. Dual analog-to-digital converters are preceded by respective amplifiers with different gains for receiving an analog input signal. The digital output signal from the analog-to-digital converter preceded by the amplifier of higher gain is selected and stored when it is not clipped. Otherwise, the analog-to-digital converter preceded by the amplifier of lower gain is selected and its digital output signal is stored. Once digital memory is filled, an adaptive formatting program selects the most appropriate parts of the memory words to achieve maximum resolution and dynamic range in an output word size.

Patent Number: 6,445,328.

Issue Date: September 3, 2002.

4. *Title:* "Equipment Roller/Slide Support."

Description: The present invention comprises a roller slide apparatus for mounting heavy equipment on support structures and which allows safe repositioning of the equipment for servicing and repair includes a lower plate assembly connected to a support structure, an upper mounting plate connected to the equipment, and a bearing assembly connected to both the lower mounting plate assembly and the upper mounting plate for facilitating movement of the upper mounting plate from a first operative position where the upper mounting plate is substantially superimposed over the lower mounting plate assembly to a second operative position where the upper mounting plate is moved away from the lower mounting plate assembly. Locking devices for maintaining the upper mounting plate in either the first or second operative positions, includes flanges formed on the mounting plates and extensions that slide into holes formed in flange or plate elements.

Patent Number: 6,254,047.

Issue Date: July 3, 2001.

5. *Title:* "System for Detecting Gunshots."

Description: The present invention provides a system for detecting gunshots includes an input device including a microphone for converting acoustic noises into signals and amplifiers for amplifying the input signals, a threshold detector for receiving the amplified signals and comparing the signals with a predetermined threshold value and for producing an output signal when the threshold value is exceeded. A pulse width detector is connected to the threshold detector for producing an output signal only if the width of the

threshold detector output signal is within a predetermined range of values. A pulse count detector is also connected to the threshold detector for producing an output signal when the level of the threshold output signal is above a peak threshold level or the number of threshold level output signals that exceed a threshold level are less than a preset limit. An output device indicates that a gunshot has occurred only when signals are received from the pulse width detector and the pulse count detector during a sampling period.

Patent Number: 6,185,153.

Issue Date: February 6, 2001.

6. *Title:* "System and Method for Performing Jamming Testing on Communication Networks."

Description: The present invention comprises a system is tested for jamming resistance by supplying a simulated jamming signal. The simulated jamming signal is produced by calculating a propagation path loss in the terrain between the system under test and a location where the jammer would be, predicting a jamming level in accordance with the propagation path loss, and generating a simulated jamming signal. The simulated jamming signal is supplied to the antenna port of the system under test. The testing does not require the use of either a real jammer or a pilot signal generator at the location where the jammer would be.

Patent Number: 5,886,626.

Issue Date: March 23, 1999.

7. *Title:* "Ballistic Optical Camera Trigger."

Description: The present invention comprises a ballistic optical camera trigger having an integrated circuit capable of converting light to a proportional frequency, wherein the integrated circuit has a fast response time and a wide dynamic range which allows it to sense positive or negative changes in light fast enough to trigger without delay for high speed imaging without computational delays or jitter causing interference. The frequency output of the integrated circuit is tracked by a phase lock loop/voltage controlled oscillator to allow it to follow slow changes in light, but not fast changes in light caused by, for example, a projectile such as a bullet. The frequency output from the integrated circuit is provided to one input of a logic gate which receives at another input thereof, a shaped pulse from the phase lock loop/voltage controlled oscillator circuit, wherein the output of the logic gate is applied to a one-shot for outputting a trigger signal.

Patent Number: 5,581,078.

Issue Date: December 3, 1996.

Brenda S. Bowen,

Alternate Army Federal Register Liaison Officer.

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DEPARTMENT OF DEFENSE

Department of the Army; Corps of Engineers

Notice of Availability of the Draft Environmental Impact Statement for the Va Shly'ay Akimel Ecosystem Restoration Feasibility Study, Maricopa County, AZ

AGENCY: Department of the Army, U.S. Army Corps of Engineers, DoD.

ACTION: Notice of availability.

SUMMARY: The Environmental Impact Statement (EIS) addresses foreseeable environmental impacts from measures being investigated to include habitat restoration, channel realignment, and sand and gravel mining quarry pit reshaping within and around the Salt River, Maricopa County, AZ. U.S. Army Corps of Engineers, the Salt River Pima-Maricopa Indian Community (SRPMIC) and the City of Mesa have cooperated in conducting this feasibility study. U.S. Army Corps of Engineers is the lead Federal Agency for this study.

The purpose of the Va Shly'ay Akimel Ecosystem Restoration Study is to produce available riparian ecosystem that will support native wildlife and vegetation, which will improve the overall ecological health of the river and return the project area to a less degraded, more natural condition. The Study resulted in a report recommending that congress authorize a project for implementation by the Corps of Engineers to address the problems and needs of the study area.

Six alternatives, including the no action alternative, are evaluated in the Draft EIS. In general, the primary difference among alternatives is the acreage of each vegetation type and the resulting water necessary to maintain the vegetation. Other differences are the inclusion or exclusion of structural features such as river channelization and bank stabilization.

This study area includes a 14-mile reach of the Salt River within the SRPMIC and City of Mesa, and its upper banks. The SRPMIC and the City of Mesa identified the need for riparian ecosystem restoration and restoration of the river channel functions.

DATES: The draft EIS will be released for public review on or about May 3, 2004.

The Environmental Protection Agency plans to publish a notice of availability of the Draft EIS in the **Federal Register** on or about May 7, 2004. The public review of the Draft EIS ends on June 21, 2004. The final public hearing is scheduled for Thursday, June 3, 2004, at 6:30 p.m., at the Lehi Community Center, 1231 East Oak Street, Mesa, Arizona. Comments concerning this Draft EIS should be submitted to the address listed below by June 21, 2004.

ADDRESSES: District Engineer, U.S. Army Corps of Engineers, Los Angeles District, ATTN: CESPL-PD-RN, P.O. Box 532711, Los Angeles, CA 90053-2325.

FOR FURTHER INFORMATION CONTACT: Ms. Sarah Laughlin, Environmental Coordinator, telephone (540) 231-8303, or Ms. Kayla Eckert, Study Manager, telephone (602)-640-2001. The SRPMIC, a cooperating entity, requests inquiries to Ms. Marilyn Ethelbah, Cultural and Environmental Services, telephone (480) 850-4157, or for any additional information. The City of Mesa requests inquiries to Mr. Gordon Haws, Senior Engineer, telephone (480) 644-2251, or for any additional information.

SUPPLEMENTARY INFORMATION: 1.

Authorization. This study was prepared as an interim response to the following authorities provided by Congress: (1) House Resolution 2425 (HR 2425), dated May 17, 1994, which states: “* * * the Secretary of the Army is requested to review reports of the Chief of Engineers on the State of Arizona * * * in the interest of flood damage reduction, environmental protection and restoration, and related purposes.” (2) The second authority is given in Public Law 761, Seventy-fifth Congress, dated June 28, 1938, known as section 6 of the Flood Control Act of 1938 of Public Law 761, which reads in part, “The Secretary of War is hereby authorized and directed to cause preliminary examination and surveys * * * at the following localities * * * Gila River and tributaries, Arizona.” The Energy and Water development Appropriations Act of 2001 (Pub. L. 106-377, dated October 17, 2000) provided \$150,000 for the U.S. Army Corps of Engineers to evaluate opportunities for environmental restoration and related matters on the Salt River in Arizona.

2. Background. The Salt River is a major tributary to the Gila River in Arizona. The river originates in eastern Arizona and flows westward to its confluence with the Gila River west of downtown Phoenix. Prior to agricultural development and urbanization of the Phoenix metropolitan area, the Salt

River was a perennial stream fed by snowmelt from mountains in eastern Arizona. In the early part of the 20th century, major modifications to the river system occurred as part of the Salt River Project, which placed several dams along the Salt River to allow diversions of water for agricultural and urban uses. Sand and gravel mining operations and other activities along the river induce additional changes to the river channel and hydrology. As diversions of water increased, the perennial flows in the river ceased, causing the groundwater table to drop. These changes in hydrological conditions caused the natural riparian ecosystem to decline to the point that only small, isolated fragments of this former habitat remain. At the present time, the study area consists of a highly disturbed riverbed with minimal extant native vegetation.

This DEIS provides: (1) A description of restoration alternatives, including the no-action alternative; (2) an analysis of the existing and future conditions of the area without the project; (3) and analyzes the impacts associated with five alternatives that have been determined to be the most feasible, including the preferred alternative (proposed action).

3. Proposed Action. The proposed action includes the establishment of approximately 200 acres of wetlands; 880 acres of cottonwood/willow stands; 380 acres of mesquite bosque; and 24 acres of Sonoran desert scrub shrub. Each vegetation types will be irrigated through either a drip irrigation system or a type of flood irrigation; both systems will use surface water currently owned by the SRPMIC, or groundwater pumped from an existing or new well. Other features include removal of invasive vegetation, reshaping of abandon sand and gravel mining pits, reshaping of some sections of the river channel to return water flow to a more natural pathway, a grade control structure, and a recreation trail system.

4. Alternatives.

a. No action: No vegetation or structural features would be placed within the Salt River.

b. Five alternatives are evaluated in the Draft EIS. In general, the primary difference among alternatives is the acreage of each vegetation type and the resulting water necessary to maintain the vegetation. Other differences are the inclusion or exclusion of structural features such as river channelization and bank stabilization.

5. Scoping Process. Participation of all interested Federal, State and county resource agencies, as well as Native American peoples, groups with environmental interests, and all

interested individuals are encouraged. The public review period will conclude 45 days after publication of this notice.

The U.S. Army Corps of Engineers and the SRPMIC and City of Mesa, the local sponsors, will consider public concerns on the Draft EIS. A summary of the public hearing and written comment letters and responses will be incorporated into the Final EIS as appropriate.

Brenda S. Bowen,

Alternate Army Federal Register Liaison Officer.

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DEPARTMENT OF DEFENSE

Department of the Army; Corps of Engineers

Chief of Engineers Environmental Advisory Board; Meeting

AGENCY: Department of the Army, U.S. Army Corps of Engineers, DoD.

ACTION: Notice of open meeting.

SUMMARY: In accordance with 10(a)(2) of the Federal Advisory Committee Act (Pub. L. 92-463), announcement is made of the forthcoming meeting. The meeting is open to the public.

Name of Committee: Chief of Engineers Environmental Advisory Board (EAB).

Date: May 13, 2004.

Location: The Faculty Club, University of California, Berkeley, CA 94720-6050, (510) 540-5678.

Time: 9 a.m. to 12 p.m.

FOR FURTHER INFORMATION CONTACT: Mr. Norman Edwards, Headquarters, U.S. Army Corps of Engineers, Washington, DC 20314-1000; Phone: 202-761-1934.

SUPPLEMENTARY INFORMATION: The Board advises the Chief of Engineers on environmental policy, identification and resolution of environmental issues and missions, and addressing challenges, problems and opportunities in an environmentally sustainable manner. The EAB will visit many locations in the San Francisco Bay area prior to the meeting to gain a better perspective of the water resources issues and challenges in the region. The public meeting, however, will focus on general issues of national significance rather than on individual project or region related topics. The intent of this meeting is to present an opportunity for the Chief of Engineers to receive the views of his EAB. Time will be provided for public comment. Each speaker will be limited to no more than three minutes