

AAPAC PROJECT PROPOSAL SUBMISSION

Name of Project:

Visual Wind – A 3D Color Experience

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CONTACT INFORMATION:

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DOES THE ARTIST OR ARTIST TEAM HAVE CREDENTIALS IN THE FIELD?

Timothy Jones is the inventor of illuminating windmills (aka "Whirlydoodles") that are similar to a wind speed meter (anemometer) but convert wind directly into luminous color. The immediate appeal of Whirlydoodles is created by their wind speed-dependant color and representation of the rhythm of the normally invisible wind. Tim has tinkered over several years to perfect the persistence of vision effect produced by wind-activated mechanisms in the belief that social reaction to a new technology is shaped by emotional appeal and that certain technological representations of environmental processes enhance our experience with nature. More recently, Tim has been working to understand the visual effects produced by the sculptural composition of multiple Whirlydoodles.

Dave Konkle was the Energy Coordinator for the City of Ann Arbor for 20 years, from 1988-2008 and is currently the Energy programs Director for the Ann Arbor Downtown Development Authority. While with the City of Ann Arbor he created many educational exhibits to showcase renewable energy, often using forms of art to get the message across. Examples of this include a solar powered fountain at the City landfill, a two-story mural painted in the stairway of the

Landfill Education Center by David Zinn to depict how the landfill gas capture system works, a David Zinn full wrap paintings on two natural gas powered City Dump Trucks, and the Sun Dragon sculpture at Fuller Swimming Pool to draw attention to the solar heating system at the pool. The Sun Dragon, created and installed by Margaret Parker, was an early project of the Art in Public Places Commission and featured many funding sources including the Michigan Council for the Arts and the Ann Arbor Community Foundation.

BRIEF DESCRIPTION OF THE PROJECT:

The proposed project would consist of 1,000 Whirlydoodle devices installed on a hillside or sloping open area in the Ann Arbor. The windmills would be set in an array across a landscape, with each individual windmill responding to wind speed by producing changes in color and brightness. Observers of the array would see wind actually flowing over the landscape in currents and eddys, similar to the flow of water in a river. The purpose of the installation is two-fold; to create an active artistic landscape where wind currents create movement and lighting, and to spark interest in alternative energy and technology. While LED lights of any color can be used on the rotors of individual windmills, a combination of red, blue and green lights produce the most dramatic range of color changes and ultimately appear bluish-pinkish-white at high wind speeds.

The applicants initiated a small test project to examine the possibility of using Whirlydoodles to create dynamic art in an urban setting and to gauge public reaction. Whirlydoodles were placed individually in several parks and other locations within the city of Ann Arbor. Over the period of several weeks in January 2012, and with the blessing of the DDA, approximately 20 units were placed randomly on light poles in the downtown area including a line of six Whirlydoodles along the south side of Washington Street between Fourth and Main streets. Small plaques with a QR (Quick Response) code and website address were used to determine if the twenty units were even noticed by the public. Interested persons could then access the website to read a brief description of Whirlydoodles and choose to reply to a questionnaire that asked "*Would You Like To See A Whirlydoodle Installation*". Of 350 total responses to the questionnaire to date¹, 317 (90.5 %) people hit the page button stating "Yes, it would look cool! And make a powerful statement about alternative energy". 24 written comments were slightly more positive and negative. There were a total of 9 (0.02 %) people selecting "No, it's a dumb idea. Very dumb". Essentially, the overall approval rate was ~94%. It should be noted that the lighting effects produced by Whirlydoodles were significantly obscured by high ambient light

¹ Survey results from 12/29/2011 (date in installation) to 4/4/2012

levels on urban streets. For a summary of current results please contact Tim or Dave.

One proposed project location is the south face of the Phase I Landfill hill at the corner of Platt and Carpenter Rd. This site offers visibility and public parking both at the nearby dog park and at the County Park across the street. We believe that the final location must allow for the visual effects to be apparent from various distances. Metrological data confirms our experience that the landfill site offers persistent wind flow. Public parking at the two nearby parks would provide access to a large viewing area where families and friends could “hang-out” and watch the Visual Wind landscape. The landfill mound array is intended to be temporary and transitory, being careful not to damage the local site and environment.

While there are several other suitable locations, the physical layout of a 30 x 33 array with a minimal windmill spacing of 10 feet would require slightly less than 100,000 square feet. The windmills would be placed on 10 ft lengths of tubing held in place by 12 inch deep ground stakes to avoid disturbing the protective landfill cap (a 24” thick impermeable clay layer under the 12” soil surface).

We expect this large installation to draw observers from miles around to Ann Arbor and gain the attention of both local and national media sources. An amusing, but media significant fact is that this installation would make Ann Arbor the community with the most wind generators of anywhere in the world. The proposed installation would be open to the public after July 4, 2012², and would remain open for a minimum of two months. If necessary to meet Art in Public Places guidelines, the installation could be left in place for two years or more, but would need to be removed from May through June each year to avoid disturbing nesting birds.

PROJECT GOALS:

This project seeks to intertwine science, art and important environmental issues in an inspirational landscape creation. The visual sensory experience created by a landscape covered with Whirlydoodles is intended to stimulate a variety of cognitive and reflective sentiments in visitors and serve as a proclamation of the local creative spirit. One goal is for visitors to take notice of nature. Windmills call attention the natural environment and to the sensation and rhythm of the wind. Ann Arbor observers of downtown Whirlydoodles frequently note that Whirlydoodles are “just plain fun to watch” or that they “bring out the kid in me”.

² The landfill is mowed between July 1 and July 4, and the site is free of fledging birds.

Aside from evoking a playful sentiment, the personal experience with nature has important emotional and physical benefits.

The project's value for science education is subtle but significant. The wind is ideal for creating fascinating visual effects. Individual Whirlydoodles allow us to sense wind speed as color and the relationship between the wind and energy. Most observers typically watch Whirlydoodles for a few minutes waiting for a good breeze to "fire things up" stimulating interest and discussion on the natural environment, meteorology or even wind technology. The restful pauses waiting for the wind to come up emphasizes how important it is for the public to understand basic facts about alternative energy technologies. A major challenge to utilizing wind and other alternative energy sources is their intermittent nature versus the demand for continuous electricity. Part of an effective solution rests with consumers understanding renewable energy and accepting electrical devices that supply-responsive: Appliances and electrical systems do not always have to be instant-on, and consumer acceptance of such systems will allow alternative energy utilities to more easily integrate with the existing electrical grid.

Use of the landfill mound for this work is appropriate but not imperative. The landfill location is preferred because of its height and possibility of being our most lasting creation from the industrial age. Unwanted and perceived as trivial, the tremendous volume of our collective rubbish is almost inconceivable; topsoil hides an immense ugliness by forming an artificially pristine landscape. Do we merely cast colorful lights on a mountain of trash to avoid the issue of our collective discards or do we challenge visitors to experience human impact by climbing a small hill and taking time to contemplate alternatives?

Another goal is for people to congregate for an evening outing with family and friends and to enjoy the nighttime ambience and sky. The sparkling colors represent the community: a glowing future, a spectrum of people, technologies and industries and the drive to reduce man's impact on the natural environment.

SITE LOCATION:

The Phase I Landfill hill on the corner of Platt and Ellsworth Roads.

ANTICIPATED SITE REQUIREMENTS:

Open parking until 12 PM nightly.

Capacity for 100 or more visitors per evening

TYPE OF MEDIA:

Luminous alternative energy art powered by the wind.

ARTIST:

Timothy Jones

PROJECTED SIZE FOR THE PROJECT:

100,000 square feet.

TIMELINE:

Complete phase II testing, currently underway in several parks to determine optimum array.

Fabrication of 1,000 Whirlydoodle units.

Complete installation following the week of July 4, 2012.

TOTAL COST AND BREAKDOWN OF COSTS:

Please see **Appendix B**, attached.

FUNDING BY APPLICANT, IF ANY:

All work and demonstration testing to this point funded by applicant. Significant non-monetary labor and planning courtesy of Dave Konkle.

TYPE OF ASSISTANCE REQUESTED OF AAPAC:

Funding or support with private fundraising.

AMOUNT TO BE FUNDED BY AAPAC, IF ANY:

Would accept any funding assistance available.

FUNDRAISING PLANS FOR THE PROJECT:

Grants and local donations

ARE THERE ANY SPECIAL NEEDS FOR THE PROJECT:

Change evening hours for local parks.

WHAT ONGOING AND FUTURE MAINTENANCE WILL BE REQUIRED?

Whirlydoodles have two year useful life and would be reused after this project for various city projects and events. Whirlydoodles are easily attached to light poles using existing banner mounts and could be used for highly accessible street art.

IS THERE COMMUNITY INVOLVMENT ANTICIPATED AS PART OF THE PROJECT:

Yes.

City of Ann Arbor Downtown Development Authority;
Ann Arbor Convention and Visitors Bureau;
Ann Arbor SPARK;
City of Ann Arbor;
Citizen volunteers;
Big George's Home Appliance Mart, Inc; and
Other participants are expected.

ANY SUPPLEMENTAL INFORMATION THAT WOULD HELP THE COMMISSION UNDERSTAND THE PROJECT:

Appendix B

Cost Estimate

Materials Required

1,000 Whirlydoodles manufactured @ \$60 per unit=	\$ 60,000
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1,000 ½" EMT tube, 10 foot lengths \$2.50 delivered cost each x 1,000 =	\$ 2,500
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1,000 12 inch lengths of ¾" EMT tube \$1.50 delivered cost	<u>\$ 1,500</u>
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Labor

Installation on light poles \$8 per unit x 1,000=	\$ 8,000
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Removal of units, \$5 per unit x 1,000=	\$ 5,000
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Sub-total	\$ 77,000
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Administrative, 15%	\$ 11,550
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TOTAL	\$ 88,550
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