



## How a Non-Profit Media Company Profits from Building Open Source Online Publishing Platform

WNET.ORG (PBS) partnered with leading NYC digital firm Tierra Innovation to build a cost-effective content management system (CMS) on the WordPress Multi-User platform (WPMU). The Open Source platform is publicly available and has the potential to transform online publishing in other non-profit media organizations.

## EXECUTIVE SUMMARY

As websites have become increasingly essential features of public media projects—with funders eager to support programs that include integrated website concepts—WNET.ORG realized that a standardized, customizable solution for managing development, publishing and maintenance of websites would offer many benefits

Seeking a flexible, low-cost content management system (CMS) for creating and maintaining the websites that are so important to today's public media, WNET.ORG turned to Tierra Innovation to think through information architecture and possible software solutions. The result: a Word Press Multi-User (WPMU) CMS platform featuring ready-made global templates and a user-friendly interface. With the WNET.ORG CMS, any public broadcaster—regardless of size or budget—can simply and economically deploy elegant, high-quality websites that will meet the fullest potential of public media in the digital age.

### Features and Benefits:

- Standard templates provide a consistent overall user experience, resulting in improved brand perception and audience retention.
- Flexible enough to support all kinds of different websites: program-specific, station portals, corporate, educational, etc.
- Eliminating the need to design, develop and maintain each individual site frees up significant manpower and reduces the time and cost to create websites.
- Allows broadcast content producers and others who do not have advanced technical knowledge to publish websites directly.
- Broader participation in publishing web content resulting in more and increased frequency of new content, resulting in increased traffic.
- Facilitates audience building and engagement through social media.

“WNET.ORG partnered with Tierra to implement a highly customized WPMU-based content management system (CMS). As a result, we have dramatically increased our publishing efficiency and flexibility while considerably lowering our relative web production costs. WNET.ORG will make our open source CMS publicly available and we invite organizations to join us to further develop this powerful delivery network for media content.”

— **Dan Goldman**

EXECUTIVE DIRECTOR OF CORPORATE FINANCE (FORMER EXECUTIVE DIRECTOR, INTERACTIVE), WNET.ORG

	Before CMS	After CMS
Average site design/build time	8-12 weeks	1-2 weeks
Average site design/build cost	\$25,000 - \$40,000	\$5,000 - \$10,000
Monthly capacity	1-2 sites	5-10 sites

WNET.ORG intends to benefit from the CMS by vertically integrating online marketing initiatives and monetization strategies across the WNET.ORG network, in addition to executing individual website campaigns.

WNET.ORG will make its customized CMS publicly available and invites other like-minded organizations with similar online publishing needs to adopt and further develop their own content delivery networks.

**BACKGROUND AND CHALLENGES**

WNET.ORG is the Public Broadcasting System (PBS) affiliate for the New York City metropolitan area and is the parent company of public television stations Thirteen and WLIW21. WNET.ORG also hosts the digital services THIRTEEN HD, KidsTHIRTEEN, WLIW Create, WLIW World, THIRTEEN on Demand, THIRTEEN Kids on Demand, and V-me; as well as an ever-expanding range of websites, including thirteen.org, wliw21.org and Thirteen EdOnline.

Since 1996, WNET.ORG has been an early adopter of Internet publishing, developing hundreds of online projects for television programs produced for national syndication and local broadcast. Over time, WNET.ORG found itself supporting an array of development, publishing and maintenance approaches. Despite its large number of web properties, WNET.ORG could not achieve economies of scale producing websites, while inconsistent design approaches hindered its ability to maintain a consistent brand identity.

In summary, a universal platform for all websites would save on ad-hoc research and development, enabling more funding to be directed to such critical elements as video rights clearances and marketing; a single publishing platform would bring increased efficiency and speed to the station’s interactive operations, freeing up resources for planning and

“The challenge was clear: how to migrate years of website content into a single, open-source system that could support WNET.ORG’s diverse initiatives at a low cost and with low technical hurdles for its content producers. We collaborated with WNET.ORG on both design and technology to create unified, extensible website templates and a new publishing system based on the WordPress platform. Since implementing the new CMS, WNET.ORG has launched dozens of websites that required significantly less production time and resources, but delivered more web traffic than previous WNET sites. Tierra continues to support WNET.ORG’s innovative web publishing and open source initiatives and we are delighted to be engaged with this important public resource.”

— **Jamie Trowbridge**  
 PRESIDENT, TIERRA INNOVATION

creating original web content; and consistent design would help improve the user experience across the PBS.ORG and WNET.ORG network of sites, contributing to the development of strong online brands and better equipping public media to respond to the transformative opportunities offered by the web.

## **PROJECT GOALS**

It was evident to both WNET.ORG and Tierra that a CMS and a set of standard templates would enable WNET.ORG to develop and maintain its network of websites more efficiently and would give the organization an opportunity to build a consistent brand across multiple sites. WNET.ORG convened a cross-functional team of designers, developers and other stakeholders and established the following goals for the project:

- To enhance the user experience by providing a clear and consistent navigational framework, familiar functionality and increased interactivity across all sites.
- To standardize WNET.ORG's website development process and make internal workflow more efficient by using a common CMS interface and publishing platform.
- To provide a cost-efficient and scalable design and publishing platform that could support all of WNET.ORG's primary web activities.

## **SOLUTION**

### ***Discovery, Requirements and Information Architecture***

The project began with a discovery phase led by Tierra. The discovery phase included a thorough review of WNET.ORG's business goals, challenges, web assets, internal capabilities and technology requirements. The milestones from the discovery phase included: a content audit, a design brief, a functional specification, the CMS selection and a set of standard website template wireframes.

### ***Content Audit***

Tierra conducted a content audit of five of WNET.ORG's marquee sites to determine the points of commonality. Despite the differences in nomenclature and themes across WNET.ORG and PBS show sites, it found that most shared a common set of core content types. Focusing on these core components, Tierra suggested a generic site map and a set of generic show wireframes that could be used as the foundation for any program site build.

## ***Design Brief***

Tierra drafted a design brief to:

- summarize WNET.ORG's business goals
- describe the vision and content of WNET.ORG's websites
- define WNET.ORG's brand positioning and target audience
- map out Tierra's design and development strategies

During the design brief phase, WNET.ORG clarified and articulated its key business objective: to implement a standardized design framework that emphasized simplicity and consistency over innovation or "breakthrough" technology. If WNET.ORG could simplify the publishing process and site design options, the broadcast teams could focus on producing quality content more efficiently.

## ***Functional Specifications***

Given the large number of sites to be published via the CMS, it was important to create a generic framework that would allow for a common design, build and publishing process. Every site would be modeled around a basic blog structure. That is, each new element of content would be added in the form of a post. Each post would contain metadata such as date stamp, tags and categories, as well as standard functions such as user ratings, comments and social media links. In order to maintain a consistent user experience across multiple sites, discourage one-off production requests, reduce time to market and mitigate costs, WNET.ORG decided to roll out a limited set of templates and imposed restrictions on the features that could be built.

Since the majority of the television content produced by WNET.ORG is in the form of serialized or episodic content, each episode would have its own "blog". The homepage of a given series, as well as various topical pages, would be structured as a "blog of blogs". Thus, the main feature of the homepage for each series would be a blog feed, featuring the posts published in chronological order within each episode blog. Theoretically, this would allow two different producers of

"The work that WNET.ORG and Tierra have done with WordPress is truly impressive and showcases the power, flexibility and potential of the WordPress platform. They developed a full content management system (CMS) and subsequently rolled out multiple sites using WordPress' built-in features and extended the platform with custom themes and plugins. By building a CMS on top of WordPress, Tierra and WNET.ORG successfully launched numerous high-traffic sites that provide a great user experience as well as editorial and creative flexibility. Combined with the largest developer community of any publishing platform, WNET.ORG and Tierra demonstrate that WordPress is an ideal choice for next generation sites."

—**Raanan Bar-Cohen**

VICE PRESIDENT, AUTOMATTIC, INC. /  
WORDPRESS

two different episodes to publish and maintain their own set of posts, while having a series homepage that automatically and dynamically updated as each individual content producer made a post. The same would be true for dynamically generated topic pages, or for any number of other types of “landing pages”. (We will discuss this process in greater detail in the Deployment section when we address WNET.ORG’s development of “horizontal aggregation” templates that are being used to build its local site templates.)

The content audit and site template wireframes highlighted certain functionality that was not already supported by WPMU or existing plugins. For example, the team discovered the need for a customizable homepage promotional tool that could flexibly support images, video, audio and a multiple choice quiz application. Other customization also was required to address WNET.ORG’s desire to use a single CMS to publish websites hosted on multiple top-level domains.

### ***Selecting a Content Management System***

Based on the content audit, the design brief and the functional specifications, Tierra conducted a survey of multiple publishing platforms, including open source and custom-built solutions, to provide WNET.ORG with the comparative data to select a content management system.

After a short deliberation period, WNET.ORG chose WPMU for the following reasons:

- **Prevalence.** WordPress’s long history as an open- source project means there is an active community of contributors providing extensive “plugin” extensions – to the point where WPMU could be used as a CMS for entire website networks.
- **Developer Interface.** WordPress has a stronger set of user interface (UI) conventions (compared to newer platforms such as Drupal). The new publishing tool needed to be fun and empowering, not overwhelming or intimidating.
- **Familiarity.** As one of the first blogging platforms, WordPress helped to define the medium. As such, the general layout and design conventions within WordPress are familiar to anyone who has visited a blog.
- **Customization Limits.** A set of standard site elements would reign in the tendency to over-customize, reducing the number of design variables to be considered and moving the discussion away from “look and feel” and toward how to produce more and better content.
- **Generic Feel.** The relatively generic look and feel of the WordPress platform would appeal to an older, less Internet-savvy public television demographic.

## ***Design and Development***

During the design and development phase, WNET.ORG's in-house design team used Tierra's wireframes to create page template designs for three shows: *Wide Angle*, *Nature* and *American Masters*. Each show site used its own color scheme and unique graphic assets. Then, Tierra's development team created a WPMU theme for each show site.

Tierra's team installed existing WPMU plugins and developed custom plugins to bridge the functionality gap between WPMU and the demands of WNET.ORG's proposed information architecture. One important example is the 'Collections' plugin. A traditional blog is organized chronologically and by category. But in order to support serialized television shows, WNET.ORG needed the ability to organize content around episodes. So, Tierra created a flexible Collections plugin which allows WNET.ORG to define any number of collections and sub-collections and assign posts to those collections (e.g. the ability to create blogs within blogs). This gives the platform much greater flexibility than the typical blog data schema by how it relates pieces of content to one another. On the following page is an image of the Collections plugin in action.

Heart of Darfur ~ Introduction | Wide Angle

http://www.pbs.org/wnet/wideangle/episodes/heart-of-darfur/

Search [wide angle] go

HOME EPISODES VIDEO FOR EDUCATORS about the series schedule shop

Episodes > Heart of Darfur > Introduction



Guide to Factions and Forces in Darfur



Timeline: History of Sudan



Latest News on the Darfur crisis



**Heart of Darfur**  
An eyewitness account of the world's largest humanitarian crisis  
July 1, 2008 watch preview

**INSIDE THIS EPISODE**

- Introduction
- Video: Full Episode
- Video: Preview
- Video: Darfuri Refugee Rebuilds his Life in Brooklyn
- Video: Jean-Marie Guéhenno Explains the Obstacles to Peace in Darfur
- Aaron Brown Interview: Nicholas Kristof
- History of Sudan
- Guide to Factions and Forces
- Map
- Additional Web Resources
- Questions for Aaron Brown
- International Court Accuses Sudanese President of Genocide
- We Stand United on Darfur
- First U.N.-African Union Peacekeeper Killed in Darfur
- U.N. Security Council Delegation Visits Darfur
- New Arab Coalition Speaks Out on Darfur

July 1st, 2008

## Heart of Darfur

### Introduction

[Read the latest news on the crisis in Darfur.](#)

**ABOUT THE ISSUE**

In the half-century since Sudan was granted independence from colonial rule, the country has been in a chronic state of civil war. Most of the fighting has been between the Arab-controlled central government in Khartoum and rebels in the predominantly Christian and animist south. But in 2003, rebels in the Darfur region of western Sudan — a predominantly black, Muslim area — rose up against the central government, angered by the economic and political marginalization of their region.



In response, government-backed militias known as the janjaweed began a "scorched earth" campaign — riding on horseback, the janjaweed looted shops, raped women, and burned entire villages to the ground. Five years later, United Nations officials estimate that as many as 300,000 people may have been killed, and more than 2.5 million have been displaced.

Done YSlow S3 fox

WIDE ANGLE'S EPISODE LANDING PAGE (PBS.ORG/WNET/WIDEANGLE)



Below is a screen grab of the collections admin UI.

The screenshot shows the 'Manage Collections' admin interface. At the top, there's a breadcrumb 'Episodes » A State of Mind' with a dropdown arrow and buttons for 'Add Sibling', 'Add Child', 'Rename', and 'Delete'. Below this is the main heading 'Episodes » A State of Mind'. The interface is divided into several sections: 'Landing Page For Collection' with a text input containing a URL and a 'Set' button; 'Manage Posts In Collection' with a dropdown for adding posts and 'Add' and 'View' buttons; a list of posts with checkboxes, a 'Remove' button, a 'Move to collection...' dropdown, a 'Move' button, and a 'Save Ordering' button; 'Manage Related Posts' with a dropdown for adding related posts and 'Add' and 'View' buttons; 'Manage Related Collections' with a dropdown for adding related collections and an 'Add' button; and 'Manage Related Links' with input fields for 'Title' and 'URL' and an 'Add' button.

COLLECTIONS ADMIN IN WORDPRESS

Tierra also created a plugin for publishing Flash-enabled promotional content. The plugin allows WNET.ORG's site editors to quickly and easily promote new content in a highly visual, engaging way. Because the promo area is powered by Flash, WNET.ORG has the flexibility to use image, video, sound or animation to promote its content. On the following page are images of the Flash promo plugin on two different sites.

**Languages revive and thrive in Mexico**  
For some indigenous Mexicans, Spanish is a second language

SIGNATURE VIDEO watch + comment ▶

**Watch the Show**

**Endangered Languages**

**Zimbabwe's Power Deal**

**talk**  
Talk To US

FLASH-ENABLED PROMO AREA ON THE WORLD FOCUS HOMEPAGE (WORLDFOCUS.ORG)

## Featured Videos

**American Eagle: Full Episode**

**Tale of an Outlaw Wolf: Full Episode**

**Shark Mountain: Full Episode**

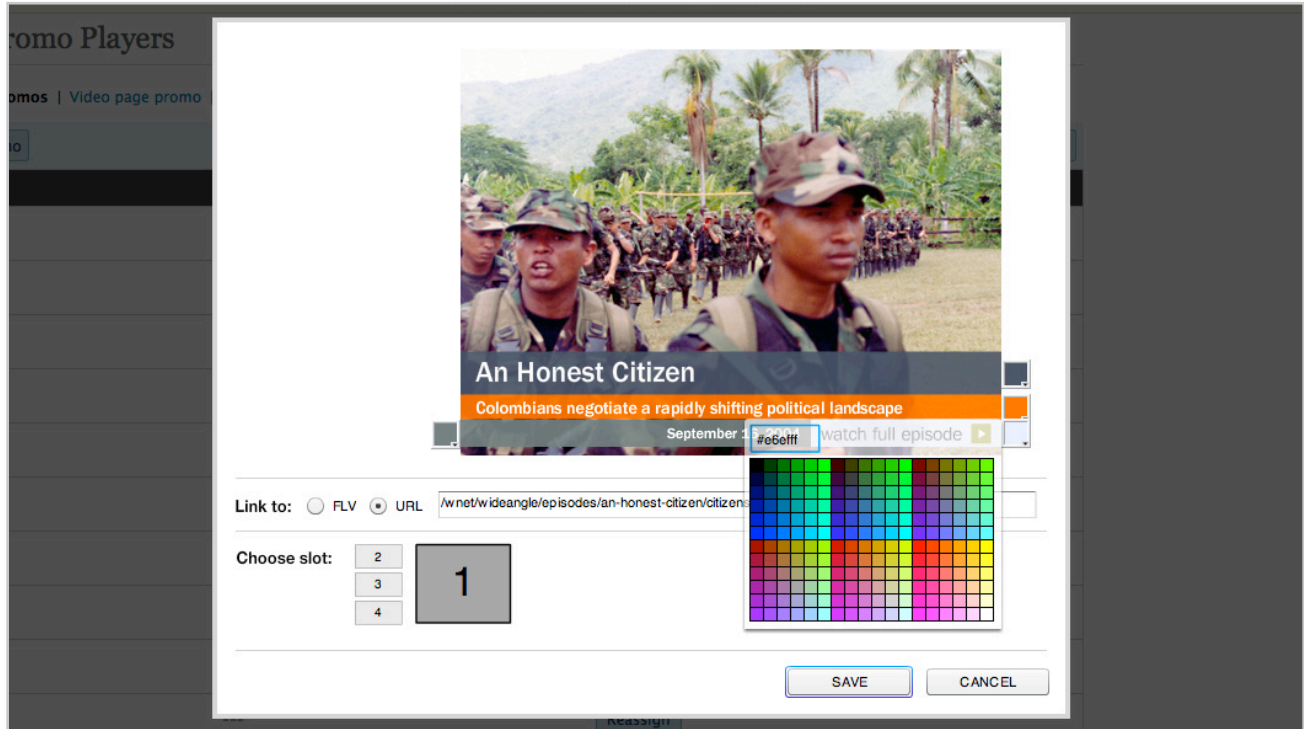
**The Dragon Chronicles**  
Watch the full episode online now

Premiered Sunday, January 11, 8:00pm

go now ▶

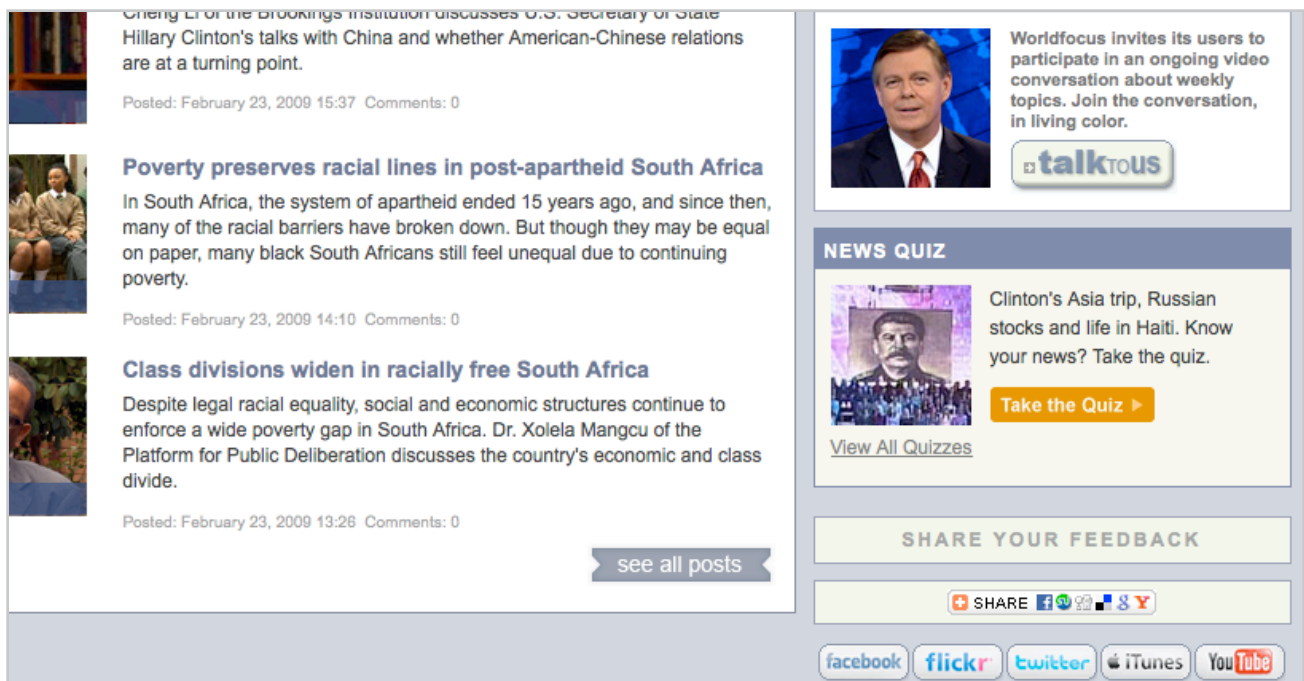
FLASH-ENABLED PROMO AREA ON NATURE'S VIDEO LANDING PAGE (PBS.ORG/WNET/NATURE/CATEGORY/VIDEO/)

Below is a screen grab of the WYSIWYG (What You See Is What You Get) editor:



A SCREEN FROM THE PROMO ADMIN IN WORDPRESS

Beyond organizing and promoting its content, WNET.ORG also wanted to explore creative ways to encourage users to interact with its sites. Tierra developed a multiple-choice quiz plugin (see below) that provided an additional interactive feature not typically found in blog software.



A QUIZ TOUT ON THE HOMEPAGE OF WORLDFOCUS.ORG

February 20, 2009

## Clinton's Asia trip, Russian stocks and life in Haiti

### RESULTS

YOUR SCORE: 57% (4 of 7 correct)

AVERAGE SCORE: 57% (4 of 7 correct)



1. This percentage of Haiti's population lives in absolute poverty.

- A. 16 percent
- B. 37 percent
- C. 49 percent ✓
- D. 59 percent

[Read this article](#)



2. U.S. Secretary of State Hillary Clinton's trip to Asia included stops in all of the following countries EXCEPT:

- A. South Korea ✗
- B. Mongolia (Correct Answer)
- C. Japan
- D. Indonesia

[Read this article](#)



In addition to television content websites, WNET.ORG also publishes sites for special events or programs that have unique functional requirements. For the annual “Celebration of Teaching and Learning” conference site, Tierra created a plugin for a sortable schedule of events (see below). Producers can use the plugin to create speaker events, assign them to categories and ‘content strands’ and associate them with a speaker’s bio. The plugin has made it easier for producers to manage and update the site and for visitors to find the events and speakers that spark their interest.

Full Schedule | Celebration of Teaching & Learning

http://thirteencelebration.org/full-schedule/?strand=6&day\_of\_session=0&S

the celebration of **teaching and learning** thirteen WLIW21

HOME REGISTER SCHEDULE SPEAKERS VIDEO EDBLOG ABOUT SPONSORS

Searchable Schedule • Dates and times are subject to change. PRINT

SORT SCHEDULE BY: CONTENT STRAND Science DAY Both Days SORT -OR- SEARCH BY KEYWORD ABOVE

### Science

#### Friday, March 6, 2009

**PLENARY SPEAKERS (0 Total)**  
No sessions found.

**FEATURED SPEAKERS (4 Total)**

**Francis Eberle**  
*What Were They Thinking? Student's Perceptions and Ideas about Science*  
STRAND: SCIENCE  
TIME: Friday, 8:30 - 9:30 am  
LOCATION: Sutton Parlor South, 2nd floor  
[Full Details >](#)

**Panel: Arlene Campbell, Kristi Dauernheim, Kristen Higgins, Dr. Lee McCaskill, Rita Peskus, Paul Skelton, and Wil van der Veen**  
*The Academy for Leadership in Science Instruction*  
STRAND: SCIENCE  
TIME: Friday, 8:30 - 9:45 am  
LOCATION: Regent Parlor, 2nd floor  
[Full Details >](#)

**Brian Greene**  
*Science and Narrative*  
STRAND: SCIENCE  
TIME: Friday, 11:15 - 12:15 pm  
LOCATION: Sutton Parlor South, 2nd floor

#### Saturday, March 7, 2009

**PLENARY SPEAKERS (1 Total)**

**Alan Alda**  
*The Human Spark*  
STRAND: SCIENCE  
TIME: Saturday, 4:00 - 5:30pm \*  
LOCATION: Chase Center Grand Ballroom, 3rd floor  
[Full Details >](#)  
\*Note: Mr. Alda's presentation will follow Mr. Gates's

**FEATURED SPEAKERS (3 Total)**

**Olivia Judson**  
*A Big Year for Darwin*  
STRAND: SCIENCE  
TIME: Saturday, 11:15 - 12:15 pm  
LOCATION: Nassau Suite, 2nd floor  
[Full Details >](#)

**Panel: Heidi Hammel and Jennifer Wiseman**  
*Space Astronomy: Looking Back, Looking Forward, and Looking Up!*  
STRAND: SCIENCE  
TIME: Saturday, 11:15 - 12:30pm  
LOCATION: Sutton Parlor Central, 2nd floor  
[Full Details >](#)

SEARCHABLE SCHEDULE ON THE CELEBRATION OF TEACHING AND LEARNING WEBSITE  
(THIRTEENCELEBRATION.ORG/FULL-SCHEDULE)

## Celebration Schedule for 2009

Delete Checked

Add Speaker to Schedule

Export to Spreadsheet

Last Name	First Name	Strand	Session Type	Day	Time	P	ID	Bio	✓
<input type="checkbox"/> Alda	Alan	Science	Plenary	Saturday	4:00 – 5:30pm	Y	2	E V	Y
<input type="checkbox"/> Bethell	Andrew	General	Featured Speaker	Saturday	8:30 – 9:30 am	Y	21	E V	Y
<input type="checkbox"/> Bowermaster	Jon	Global Awareness	Featured Speaker	Friday	11:15 – 12:15 pm	Y	4	E V	Y
<input type="checkbox"/> Burns	Marilyn	Math	Featured Speaker	Friday	8:30 – 9:30 am	Y	7	E V	Y
<input type="checkbox"/> Canada	Geoffrey	Whole School Issues	Featured Speaker	Friday	11:15 – 12:15 pm	Y	9	E V	Y
<input type="checkbox"/> Devlin	Keith	Math	Featured Speaker	Friday	2:30 – 3:30pm	Y	13	E V	Y
<input type="checkbox"/> Eberle	Francis	Science	Featured Speaker	Friday	8:30 – 9:30 am	Y	82	E V	Y
<input type="checkbox"/> Gabel	Medard	Global Awareness	Featured Speaker	Saturday	11:15 – 12:15 pm	Y	14	E V	Y
<input type="checkbox"/> Gates, Sr.	Bill	Whole School Issues	Plenary	Saturday	4:00 – 5:30pm	Y	97	E V	Y
<input type="checkbox"/> Grandin	Temple	Autism	Plenary	Saturday	10:00 – 11:00 am	Y	17	E V	Y
<input type="checkbox"/> Greene	Brian	Science	Featured Speaker	Friday	11:15 – 12:15 pm	Y	19	E V	Y
<input type="checkbox"/> Horn	Michael	Technology	Featured Speaker	Friday	2:30 – 3:30pm	Y	88	E V	Y
<input type="checkbox"/> Judson	Olivia	Science	Featured Speaker	Saturday	11:15 – 12:15 pm	Y	22	E V	Y
<input type="checkbox"/> Levitin	Daniel	Science	Featured Speaker	Saturday	2:30 – 3:30pm	Y	24	E V	Y
<input type="checkbox"/> Mayerson	Gary	Autism	Featured Speaker	Saturday	11:15 – 12:15 pm	Y	26	E V	Y
<input type="checkbox"/> McKellar, Interviewed by Dennis Van Roekel	Danica	Math	Plenary	Saturday	1:00 – 2:00 pm	Y	84	E V	N
<input type="checkbox"/> Muller	Richard	Science	Featured Speaker	Friday	2:30 – 3:30pm	Y	28	E V	Y
<input type="checkbox"/> Opening Plenary		Literacy	Plenary	Friday	10:00 – 11:00 am	Y	46	E V	N
<input type="checkbox"/> Panel: Aaron Brown, Martin Savidge, and Leah Clapman		Global Awareness	Featured Speaker (Panel)	Friday	8:30 – 9:45 am	Y	39	E V	Y
<input type="checkbox"/> Panel: Alisa Berger, Mary Moss, and Kathy Tsamasiros		Technology	Featured Speaker (Panel)	Friday	8:30 – 9:45 am	Y	170	E V	Y

### CELEBRATION SCHEDULE ADMIN IN WORDPRESS

While working with WNET.ORG, Tierra made its first open source contribution to the WPMU community. Tierra developed WPDB Profiling 1.0 to identify plugins that may not have proper caching enabled or supported. Tierra frequently found the need for full database query profiling on a page-by-page basis. Tierra used the WPDB Profiling plugin tool to optimize projects and plugins that are in development. The plugin provides the total number of queries to the database per page, as well as the total time it takes to render those queries out to the page. Additionally, line-by-line, each individual query will display with the originating SQL statement, time executed and the function call used to execute the query.

In June 2009, Tierra released a new version (1.1) of its WPDB Profiling Plugin for WordPress: <http://wordpress.org/extend/plugins/wpdb-profiling/>

The updated plugin displays all of the db queries at the very footer of the page showing any slow and potentially hazardous queries, which can bring your db to a halt. The new version checks to see if you have db caching enabled, either via several plugins or via a built in WP\_CACHE function. It also makes enabling it more automatic with a new administration interface.

Using WPMU and the innovative components and customized templates provided by Tierra, WNET.ORG is now able to publish rich-media sites that do not look like standard blogs. In under 10 months, they have used this platform to expeditiously launch more than 50 sites and sub-sites, with a consistent user experience, and little or no database or server-side customization, all of which feature social media integration and a common back-end.

## **CONTENT MIGRATION**

To facilitate migration of legacy websites to the new CMS, Tierra developed a crucial Django/Python content migration application to auto-process, standardize and easily import legacy WNET.ORG websites into the WPMU framework. The Tierra team devised a content migration plan, including an analysis of legacy content porting issues. Tierra then developed an automated script for processing the content from the original sites and importing it into WPMU. After importing the content, Tierra and WNET.ORG conducted a final review of the content before launch. The content migration web application accelerated the launch time of the three initial pilot websites. Later on, the Tierra app enabled WNET.ORG to migrate numerous additional sites to the WPMU platform without Tierra's assistance.

## **DEPLOYMENT**

Working with Tierra, WNET.ORG migrated two national sites—*Wide Angle* ([www.pbs.org/wideangle](http://www.pbs.org/wideangle)) and *Nature* ([www.pbs.org/nature](http://www.pbs.org/nature))—to the new CMS and relaunched them approximately four months from the first discussions. The next site, *American Masters* (<http://www.pbs.org/wnet/americanmasters/>), was launched approximately one month later. Since then, WNET.ORG has had the in-house capability to launch new sites without formal collaboration with Tierra.

In addition, WNET.ORG developed the expertise to easily create new WPMU templates that expanded the application beyond “vertical,” episodic content to “horizontal,” aggregated and curated content. For example, WNET.ORG was able to launch horizontal sites for WNET.ORG, THIRTEEN.ORG and WLIW.ORG, automatically incorporating existing content from the national WPMU content database, while adding site-specific, local content.



A SELECTION OF WNET.ORG'S WPMU-POWERED SITES

As alluded to previously, other challenges in implementing WPMU included:

- Developing the ability, using a single codebase, to simultaneously host sites using the unique server configuration at PBS.ORG, as well as on WNET.ORG's own more conventional server configuration.
- The ability to publish sites under its own domains (worldfocus.org, etc.) in addition to the PBS.ORG (pbs.org/nature) and local WNET.ORG domains (Thirteen.org, WNET.ORG, etc).

By utilizing existing WPMU plugins, and in collaboration with the tech team at PBS, WNET.ORG wrote custom code which allowed for easy deployment of sites across all of these use cases. On the following page is a screen shot of the Sites plugin that was created to manage the publication of sites on multiple domains.



## Sites

ID	Domain	Path	Blogs			
<input type="checkbox"/> 1	dev.wnet.org	/	1	<a href="#">Assign Blogs</a>	<a href="#">Edit</a>	
<input type="checkbox"/> 2	dev.thirteen.org	/	22	<a href="#">Assign Blogs</a>	<a href="#">Edit</a>	<a href="#">Delete</a>
<input type="checkbox"/> 3	dev2.wliw.org	/	5	<a href="#">Assign Blogs</a>	<a href="#">Edit</a>	<a href="#">Delete</a>
<input type="checkbox"/> 4	dev.jewsofnewyork.org	/	1	<a href="#">Assign Blogs</a>	<a href="#">Edit</a>	<a href="#">Delete</a>
<input type="checkbox"/> 5	dev2.publictelevisionrocks.org	/	1	<a href="#">Assign Blogs</a>	<a href="#">Edit</a>	<a href="#">Delete</a>

## Add Site

<b>Site Name:</b> <input type="text"/>	<b>Clone Site:</b> <input type="text" value="dev.wnet.org"/>
<b>Domain:</b> <input type="text" value="http://"/>	<b>Options to Clone:</b> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> admin_email</li> <li><input type="checkbox"/> admin_ssl_additional_urls</li> <li><input type="checkbox"/> admin_ssl_ignore_urls</li> <li><input checked="" type="checkbox"/> admin_user_id</li> <li><input checked="" type="checkbox"/> allowedthemes</li> <li><input type="checkbox"/> blog_upload_space</li> <li><input type="checkbox"/> fileupload_maxk</li> <li><input checked="" type="checkbox"/> first_post</li> <li><input type="checkbox"/> illegal_names</li> <li><input type="checkbox"/> menu_items</li> <li><input type="checkbox"/> registration</li> <li><input type="checkbox"/> registrationnotification</li> <li><input checked="" type="checkbox"/> site_admins</li> <li><input type="checkbox"/> site_name</li> <li><input type="checkbox"/> upload_filetypes</li> <li><input checked="" type="checkbox"/> welcome_email</li> </ul> <small>Options added by plugins may not exist on all sites.</small>
<b>Path:</b> <input type="text"/>	

## **FUTURE GOALS**

WNET.ORG embarked on the development of a CMS platform to benefit its own abilities to create and publish web content in an efficient and cost-effective way. But having realized the benefits within its own work, it now looks to redistribute this innovative open source-based code to any and all public broadcasting-related non-profit organizations interested in joining a collaborative technology platform.

For some time now, most non-profit organizations have recognized the benefits of using the Internet as a marketing channel, and in using open- source solutions to iterate new approaches. Yet many non-profit organizations face challenges in leveraging these platforms to create or capitalize on broader strategic opportunities. WNET.ORG believes that its newly created and proven CMS can contribute to advancing broader institutional strategies of non-profits in general, and help enable media companies, in particular, to maintain a competitive edge with respect to commercial counterparts.

Toward that end, in the spirit of collaboration and shared innovation, WNET.ORG is making its customized WPMU-based CMS available to any non-profit arts, cultural or media entity that believes it can benefit from a similar platform or features.

## **SITES USING THE NEW WNET.ORG CMS**

The following is a partial list of WNET.ORG sites using the Tierra-customized WPMU platform:

### **National Program Websites**

1. *American Masters* - [www.pbs.org/wnet/americanmasters/](http://www.pbs.org/wnet/americanmasters/)
2. *Ascent of Money* - [www.pbs.org/wnet/ascentofmoney/](http://www.pbs.org/wnet/ascentofmoney/)
3. *Blueprint America* - [www.pbs.org/wnet/blueprintamerica/](http://www.pbs.org/wnet/blueprintamerica/)
4. *Cinema's Exiles* - [www.pbs.org/wnet/cinemasexiles/](http://www.pbs.org/wnet/cinemasexiles/)
5. *Cry for Help* - [www.pbs.org/wnet/cryforhelp/](http://www.pbs.org/wnet/cryforhelp/)
6. *Great Performances* - [www.pbs.org/wnet/gperf/](http://www.pbs.org/wnet/gperf/)
7. *The Human Spark* - [www.pbs.org/wnet/humanspark/](http://www.pbs.org/wnet/humanspark/)
8. *Looking for Lincoln* - [www.pbs.org/wnet/lookingforlincoln/](http://www.pbs.org/wnet/lookingforlincoln/)
9. *Make 'Em Laugh* - [www.pbs.org/wnet/makeemlaugh/](http://www.pbs.org/wnet/makeemlaugh/)
10. *Nature* - [www.pbs.org/wnet/nature/](http://www.pbs.org/wnet/nature/)
11. *Religion & Ethics Newsweekly* - [www.pbs.org/wnet/religionandethics/](http://www.pbs.org/wnet/religionandethics/)
12. *Where We Stand* - [www.pbs.org/wnet/wherewestand/](http://www.pbs.org/wnet/wherewestand/)
13. *Wide Angle* - [www.pbs.org/wnet/wideangle/](http://www.pbs.org/wnet/wideangle/)

14. *The Music Instinct* - [wpmu.thirteen.org/wnet/musicinstinct/](http://wpmu.thirteen.org/wnet/musicinstinct/)
15. *Secrets of the Dead* - [www.pbs.org/wnet/secrets/](http://www.pbs.org/wnet/secrets/)
16. *Worldfocus* - [www.worldfocus.org](http://www.worldfocus.org)

### **Local Station Websites**

1. *Thirteen* - [www.thirteen.org](http://www.thirteen.org)
2. *Broadcasting While Black* - [www.thirteen.org/broadcastingwhileblack/](http://www.thirteen.org/broadcastingwhileblack/)
3. *Carrier* - [www.thirteen.org/carrier/](http://www.thirteen.org/carrier/)
4. *Celebration of Teaching and Learning* - [www.thirteencelebration.org](http://www.thirteencelebration.org)
5. *Curious* - [www.thirteen.org/curious/episodes/](http://www.thirteen.org/curious/episodes/)
6. *Green Thirteen* - [www.thirteen.org/greenthirteen/](http://www.thirteen.org/greenthirteen/)
7. *Greenquest* - [www.thirteen.org/sites/greenquest/](http://www.thirteen.org/sites/greenquest/)
8. *Inside Thirteen* - [www.thirteen.org/insidethirteen/](http://www.thirteen.org/insidethirteen/)
9. *It's the Economy, NY* - [www.thirteen.org/itseconomyny/](http://www.thirteen.org/itseconomyny/)
10. *Leading with Kindness* - [www.wliw.org/leadingwithkindness/](http://www.wliw.org/leadingwithkindness/)
11. *Learning Matters* - [www.learningmatters.tv](http://www.learningmatters.tv)
12. *In the Footsteps of Marco Polo* - [www.wliw.org/marcopolo](http://www.wliw.org/marcopolo)
13. *Muslim Voices* - [www.thirteen.org/muslimvoices/](http://www.thirteen.org/muslimvoices/)
14. *Our Vanishing Wilderness* - [www.thirteen.org/ourvanishingwilderness/](http://www.thirteen.org/ourvanishingwilderness/)
15. *PTV Digital Archive* - [www.thirteen.org/sites/ptvdigitalarchive/](http://www.thirteen.org/sites/ptvdigitalarchive/)
16. *Public Television Rocks* - [www.publictelevisionrocks.org](http://www.publictelevisionrocks.org)
17. *Reel13* - [www.thirteen.org/sites/reel13/](http://www.thirteen.org/sites/reel13/)
18. *September 11* - [www.thirteen.org/september11/](http://www.thirteen.org/september11/)
19. *Soul!* - [www.thirteen.org/soul/](http://www.thirteen.org/soul/)
20. *Sunday Arts* - [www.thirteen.org/sundayarts](http://www.thirteen.org/sundayarts)
21. *The City Concealed* - [www.thirteen.org/thecityconcealed/](http://www.thirteen.org/thecityconcealed/)
22. *Thirteen Forum* - [www.thirteen.org/forum/](http://www.thirteen.org/forum/)
23. *Thirteen Kids* - [www.thirteen.org/kids/](http://www.thirteen.org/kids/)
24. *Uncertain Industry* - [www.thirteen.org/uncertainindustry/](http://www.thirteen.org/uncertainindustry/)
25. *Unsung Heroines* - [www.thirteen.org/unsungheroines/](http://www.thirteen.org/unsungheroines/)
26. *WNET.org* - [www.wnet.org/](http://www.wnet.org/)
27. *WLIW.org* - [www.wliw.org/](http://www.wliw.org/)

**About WNET.ORG** ([www.wnet.org](http://www.wnet.org))

New York public media company WNET.ORG is a pioneering provider of television and web content. The parent of THIRTEEN, WLIW21 and Creative News Group, WNET.ORG brings such acclaimed broadcast series and websites as *Worldfocus*, *Nature*, *Great Performances*, *American Masters*, *Charlie Rose*, *Wide Angle*, *Secrets of the Dead*, *Religion & Ethics Newsweekly*, *Visions*, *Consuelo Mack WealthTrack*, *Wild Chronicles*, *Miffy and Friends*, and *Cyberchase* to national and international audiences. Through its wide range of channels and platforms, WNET.ORG serves the entire New York City metro area with unique local productions, broadcasts and innovative educational and cultural projects. In all that it does, WNET.ORG pursues a single, overarching goal—to create media experiences of lasting significance for New York, America and the world. For more information, visit [www.wnet.org](http://www.wnet.org).

Contact info: Dan Goldman

Executive Director of Corporate Finance  
(former Executive Director, Interactive)  
212-560-2078  
[goldmand@thirteen.org](mailto:goldmand@thirteen.org)

**About Tierra Innovation** ([www.tierra-innovation.com](http://www.tierra-innovation.com))

Tierra Innovation designs and builds digital products that are engaging, easy to use and cost-effective. Tierra helps clients identify their particular needs, develop digital strategies and implement customized solutions that scale with their vision and growth. Tierra offers a full range of services from designing and developing websites, publishing software and mobile applications to conducting user experience research and executing marketing initiatives. Clients include: CBS Corporation, The Council on Foreign Relations, The CW Network, Napster, NFL Network, The Poetry Foundation, Turner Sports Interactive, Warner Bros. and WNET.ORG (PBS), among others. Founded in 2002, Tierra Innovation is privately held and is based in New York City. Visit [www.Tierra-Innovation.com](http://www.Tierra-Innovation.com) for more information.

Contact info: Jamie Trowbridge

President  
347-410-5900 x 101  
[jamie@tierra-innovation.com](mailto:jamie@tierra-innovation.com)