

A Message for Educational Content Providers:

- You may be a state, a public television station, a university research group or a public institution.
- You have rich educational content to make available to PK12 public education and you are searching for the right distribution and delivery medium on the Internet to enable you to reach schools, teachers, and students.

Needed: An Internet Delivery System.....

This is not an easy problem. You either need to buy or license someone's expensive solution, or embark on the time consuming and risky task of building your own YAPS (yet another portal solution)

This paper will illustrate why those two solutions are very bad ideas, and show you an excellent way to solve your Internet delivery problem in a reasonable time, and at a reasonable cost.

Why Can't This Just Be Simple?



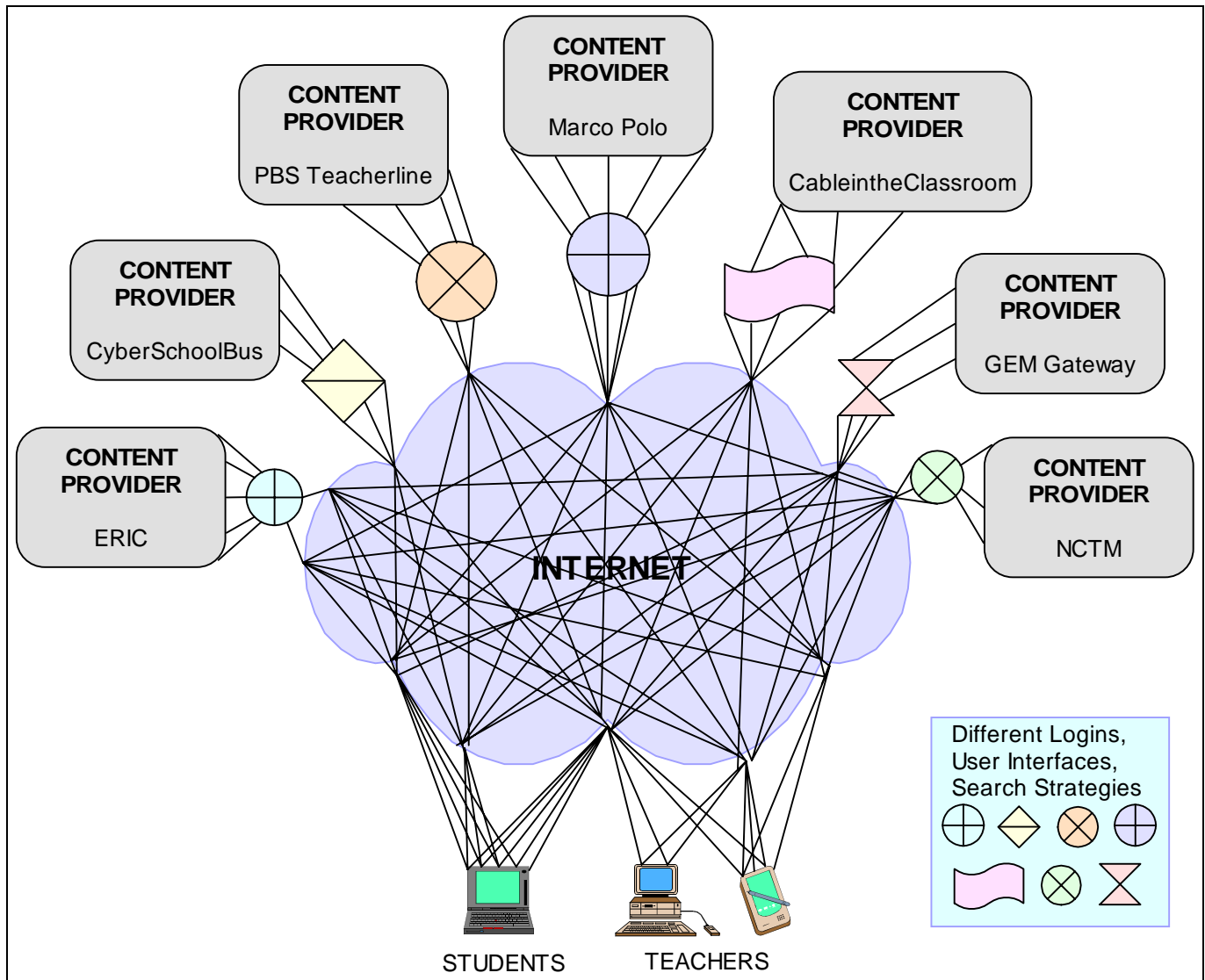
Every day teachers and students are confronted with “*Negreonte’s Dilemma*” on the Web. They don’t want 500 channels, or even another really good channel. What they do want is just **one** channel that always has on it what **they** want, **when** and **where** they want it.

What You Might Get Is Aggregation Entropy!

The current educational content environment on the web is characterized by a lack of standards, browser incompatibility issues, rich media bottlenecks, no digital rights management, inadequate metadata, poor correlation with learning standards, the need for multiple passwords and different user interfaces, divergent metaphors and cognitive friction. Each time a new resource is added, regardless of how worthy, **aggregation entropy** is created that diminishes the value of that new offering and all the others.

Read on to understand why an OpenVES strategic partnership can get you closer to a solution.

The Current Problem: More Can Actually Be Less!



Every one of the web sites illustrated in this chart is an excellent resource for students and teachers. Tens of millions of dollars have been spent to collect and present very high quality content relevant to what teachers and students do in the classroom.

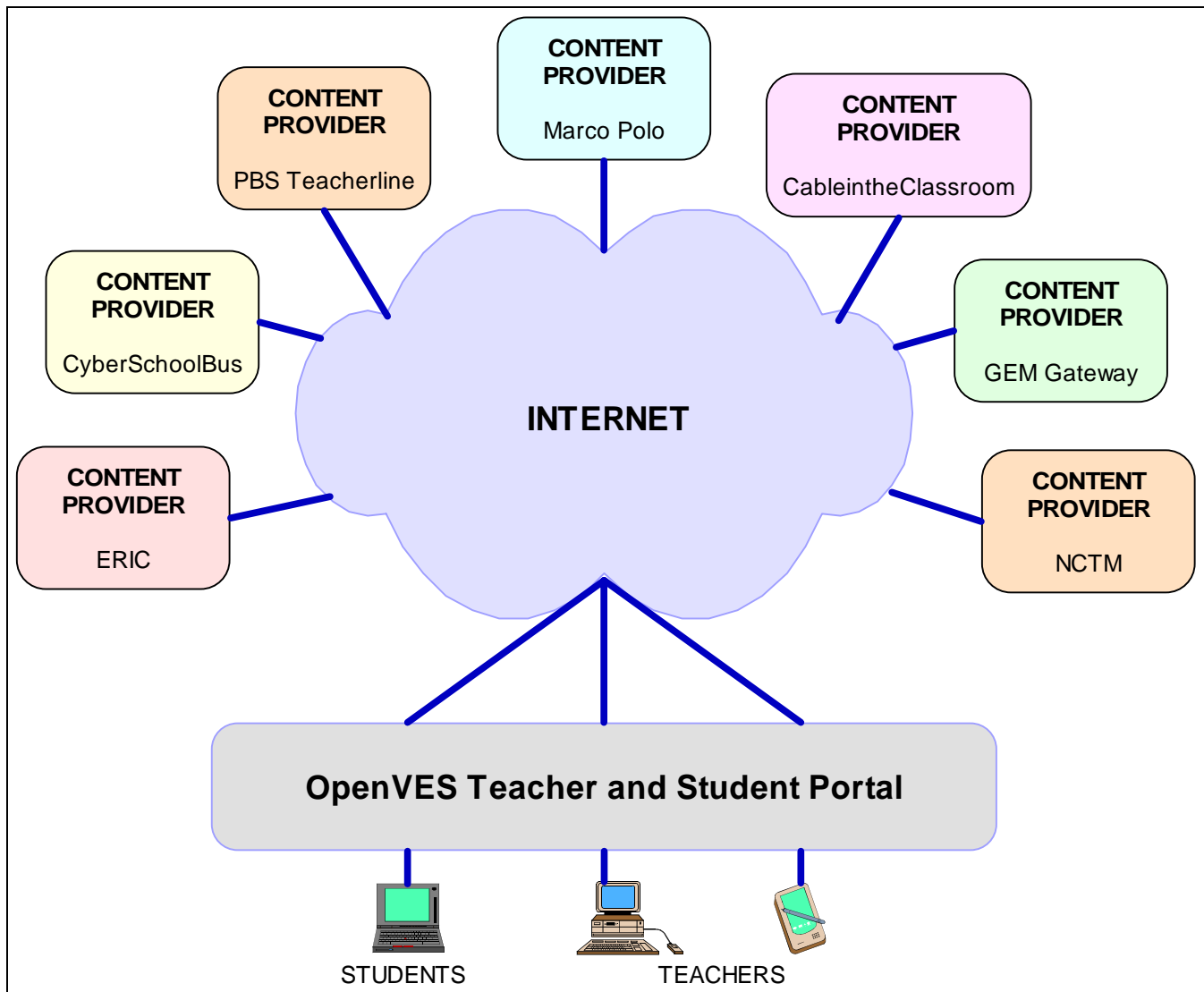
So, what is wrong with this picture?

Taken alone each of these sites is a valuable, award winning, resource for teaching and learning. Put together with dozens of other wonderful sites in the context and constraints of the typical public school classroom, however, the sites in aggregate become simply unusable.

How many teachers and students do you think want to remember another password, learn a new interface, try to figure out arcane search strategies, or attempt to discover content related to their state's standards only to wind up with an unfulfilling dead end, or something that is just "close"?

The solution begins with thinking differently about the problem.

THERE IS A SOLUTION: An Open Architecture eLearning Platform



How did it get so simple? By replacing the morass of confusion, friction, and complexity in the current environment it is possible to engineer a much better solution that adds clarity, synergy, and value. A robust eLearning Delivery Platform, using widely accepted Web standards, can shroud the complexity and make things so simple for teachers and students that their use of content will soar. In that environment, content providers will be differentiated by their content.

Each of the ad hoc interactions in the current web environment can be implemented using a more standard interface. Think about service and news subscriptions, notifications, user authentication, security, CIPA, COPPA, accessibility requirements, user preferences and profiles, mailing lists, metadata, personalization, customization, internationalization, and learning standards correlation.

What if you had a roadmap to help answer some of these hard questions? What if you were working with partners who knew PK12 requirements and had answers? What if states were ready to prototype and invest in delivery system infrastructure to bring this simplicity and power to every teacher and student in their state?

Would you be ready?

What Will It Take To Make It Happen?

We have already done the hard part by designing, architecting, and building the core delivery infrastructure of the distribution channel, and by beginning to convince states and big cities to start using it with a group of 5-7 pilots and prototypes next year.

We need educational content providers to join with us in these pilots and prototypes, and to implement the standards described below. That will make a compelling case for states deciding to go to scale. When they do, you will be able to leverage their investments to reach millions of students and teachers with your content and programs.

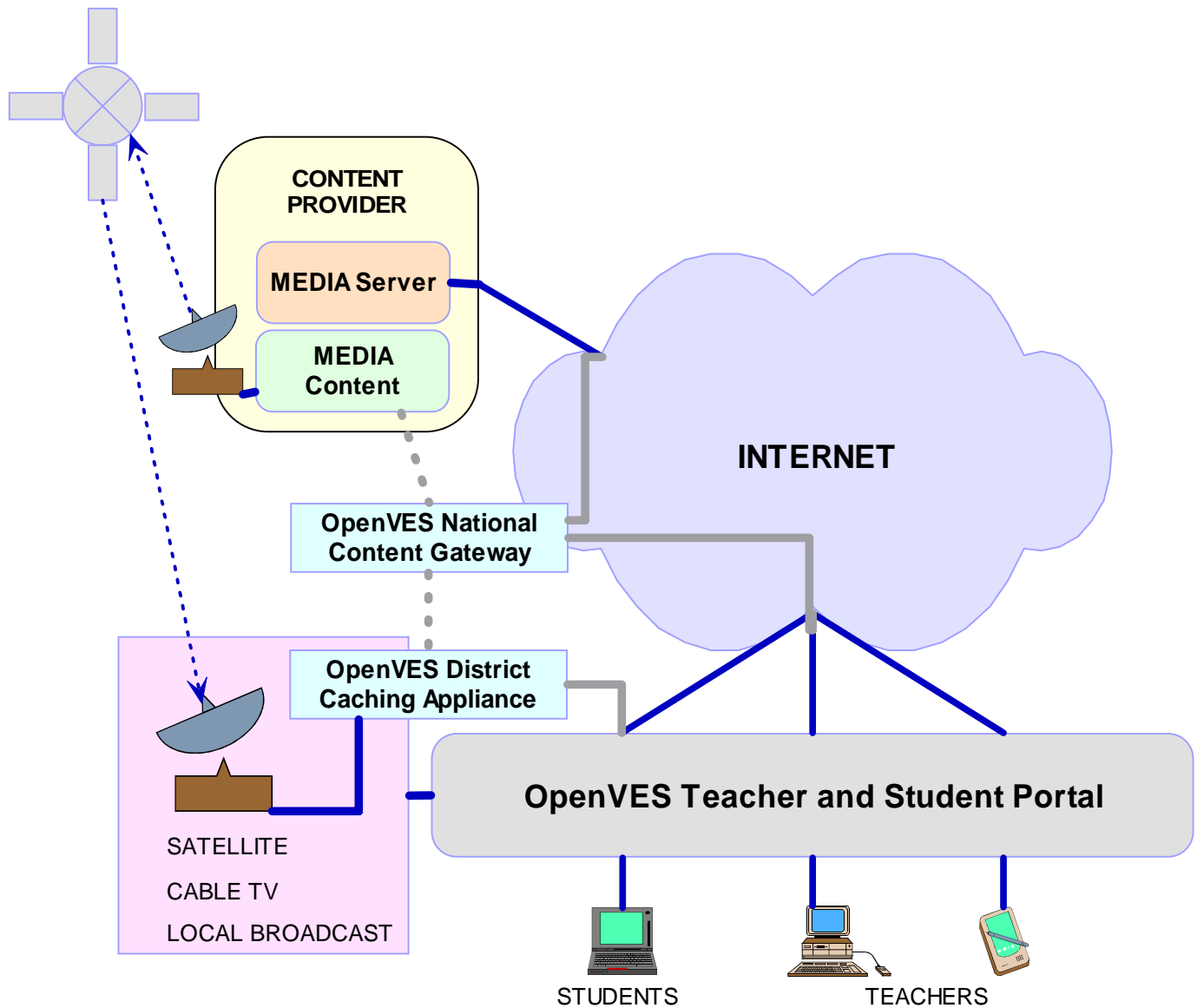
ISSUE	PROBLEM	STANDARD	SOLUTION
Product News and Updates	If they do not visit your site they may not know the good things you offer, and the new ones.	RSS and OpenVES Subscription Services OpenVES auto-subscribe can also make it easy for users to join your mailing lists.	By publishing an RSS XML News Feed users can subscribe, or we can push your news to them.
User Authentication Single Sign-On	You may not have built real authentication into your site because of the costs of verifying the identity of teachers and students. If you have not done that you may have safety, security, COPPA and other serious issues.	Liberty Alliance Identity Management uses the HTTP protocol to implement federated network identity management solutions, which are open architecture and non-proprietary.	OpenVES is implementing the tools to work with you to build safe, secure, and trusted communities of PK12 federated identity. These solutions will include Single Sign-on so users will always be one click away from your content.
Personalization and Customization User Preferences, Learning Styles, Privacy Policies, AUPs, and Accessibility Requirements	If you cannot authenticate and build your own profiles you have no way to know important information about your users. Without it your site will be less useful, compelling, and sticky and you could run afoul of the law.	The OpenVES portable profile specifications make it possible for you to exchange user profiles and to more richly customize and personalize your site's interactions with teachers and students.	We work with states and school districts to manage the costly authentication identity setup issues. A set of well defined profiles is used to manage the myriad of user personalization issues.
Metadata and Correlation with State and Local Learning Standards	If you are using a curriculum classification system you already know its weaknesses, costs, and defects. Even if you classify to national standards your percentage of success in meeting teacher curriculum needs is probably pretty low.	We have developed a deep classification model that solves this problem and makes it possible to deploy your content in a teacher and student centric "push" model instead of the conventional "search click and wait" model.	With the curriculum classification model in hand, and working with us to refine the best taxonomies and ontologies to support it, you can reduce the costs of your asset cataloging, and improve the relevance of discovery.
Calendar and Event Notifications	Users want to know about your events and schedules.	Using IETF iCalendar protocol you can put your events in teacher and student calendars	This transparent calendar management capability is very easy and opens new vistas.
Rich Interactive Media Interface	If you build or buy a solution today you will probably have to scrap it and buy a new one when you are ready to deploy richer interactive multimedia assets. Your portal choice may unnecessarily restrict your choices of edge devices and other digital distribution.	OpenVES is working with MPEG-4 and designing pervasively XML based delivery infrastructure to be able to support MPEG-7 and MPEG-21 in the future. The OpenVES architecture also supports satellite, broadcast and cable DVB delivery.	We have developed a new 4 th dimensional portal metaphor that supports three spatial dimensions and a temporal dimension. This platform will support your needs today, and support your needs for greater multimedia interactivity and internet video in the future.
Embedded Link Management Digital Rights Management	When you change a link the ripple effect drives users who have embedded it crazy. How do you manage rights???	The OpenVES xLINKS model assures URL persistence in user documents regardless of how many times yours change	Regardless of your rights and licensing models we can work with you to implement them in the xLINKS Gateway Model.

Tell me more.....

What About Digital Delivery Outside the Internet?

You have rich media content you want to share with teachers and students, but high quality Internet delivery is complicated and very costly. Sometimes without a broadband connection at the school, it is just not possible.

OpenVES Provides Multiple Channels For Digital Media Delivery



OpenVES includes a caching and content management appliance at states and every district. School appliances are optional. The OpenVES Solution can support a variety of models of digital content distribution:

- Real-time Internet Streaming
- Internet and Intranet Multicasting
- Download to Local Appliance
- Satellite Broadcast – Appliance Integration
- Local Digital Broadcast or Cable Broadcast
- Dynamic Distributed Cache Management

For more information, or to join the multi-state Sandbox pilot program, visit www.openves.org