

China Seed Market To Hit \$3.9 Billion!

Shandong Zhouyuan Seed and Nursery Co., Ltd (SZSN)
\$0.28 UP 16.6%

China is the second largest seed market in the world. China's current market is \$2.9 Billion annually and experts forecast it to hit \$3.9 Billion in the next 2.5 years. SZSN is already expanding to keep ahead of the demand. Read the news, and watch for more Monday. Get on SZSN!

By using these managed wrappers, you should easily be able to integrate SideShow functionality into your own applications.

The first column shows the installed applications that know how to communicate with SideShow devices; these are the SideShow gadgets.

Capabilities, Events, and NotificationsA gadget application can query Windows, asking it how many devices are connected to it and what the capabilities are of these devices.

However, there are a number of scenarios that prevent the GC from doing its job efficiently and result in higher managed memory use than would otherwise be required.

Some will allow bitmaps to be displayed while some may only allow text.

If we forget to null out rooted references, the GC is prevented from efficiently freeing memory as quickly as possible, resulting in a larger memory footprint for the application.

If not, additional memory is requested from the operating system.

Although Prilosec OTC is a PPI, many doctors do not prescribe this as a treatment for conditions such as GERD.

The device will then show the notification until it is dismissed by the user or until the expiration time has elapsed.

Gadget InstallationWhen developing a SideShow gadget, you must first create a GUID for it; this becomes the gadget's ID and Windows Vista uses this ID to interact with the gadget.

If not, additional memory is requested from the operating system.

It's a digestive problem that occurs when stomach acid comes into contact with the lining of the esophagus, causing irritation.

If the fragmentation is being caused by concatenation of large numbers of strings, examine whether the System.

Eventually the finalizer thread will run the object's finalizer and it can subsequently be collected.

If it isn't, look for the leak in the unmanaged component using traditional debugging techniques.

Likewise, you can imagine scenarios where I might want information on traffic, flights, weather, financial transactions, and so on.

A gadget application could use the device capabilities when deciding what content to push down to a device.

The lifetime of this application is determined completely by the user.

SimpleContentFormat namespaces, making it easy to build SideShow gadgets or to integrate SideShow functionality into an already existing application.

When running, a gadget can send a notification to a SideShow device by calling SideShowGadget's ShowNotification method.

Unleash Your Imagination With XNA Game Studio Express by Charles Cox and Michael KlucherCrystal Reports: Add Professional Quality Reports to Your Application with Visual Studio .

A gadget application could use the device capabilities when deciding what content

t to push down to a device.

Although not recommended, a finalizer could do something silly such as logging t o a database or calling Thread.

NET Framework, such as the XmlSerializer, use dynamic code generation internally

.
NET CLR Memory-Finalization Survivors, which is the number of objects during the last garbage collection that survived due to a finalizer.

The Microsoft gadgets initiative is committed to alleviating this problem.

It can, however, cause an overuse of managed heap memory and excessive amounts o f processor time spent in the GC.

By using these managed wrappers, you should easily be able to integrate SideShow functionality into your own applications.

When Windows communicates with the device, the operating system creates a WUDFHo st.

The delegate is added to the Cache object.

Typically, this isn't the end of the world, as most applications only have one A ppDomain, and its teardown is due to the process being shut down.

A single computer can have multiple SideShow devices connected to it simultaneou sly.

If we forget to null out rooted references, the GC is prevented from efficiently freeing memory as quickly as possible, resulting in a larger memory footprint f or the application.

You're suffering from severe heartburn.

If you write a managed SideShow gadget using this assembly, you will have to ens ure that this DLL gets on to the end user's machine.

When we make changes in our lifestyles, we are able to have some control over th ese heartburn episodes.

If the user wants to examine content that has been purged, the device must notif y the gadget on Windows so that it can push down the discarded content again.

The current Microsoft firmware divides the memory on the device equally among al l the gadgets connected to the device.

Your gadget's setup program should create its own registry subkey and set any of the registry values it desires.

A gadget can also be marked as online-only, meaning that the user can only inter act with the gadget on the device if both the computer and the gadget on Windows are running.

When a gadget has memory taken away from it, the device uses the cache policy se t by the gadget via its CacheAlgorithm registry value.

If it isn't, look for the leak in the unmanaged component using traditional debu gging techniques.

"Leaking" Managed Heap MemoryNow let's turn our attention to "leaking" managed m emory.

Frequently Asked QuestionsIf you have questions about GERD, GERD complications, ulcers, or hiatal hernias, the following FAQs will probably give you the answers you want.

NET Framework" for more information.

The reference to the Thread object is being dropped every time through the loop, but the GC does not reclaim the memory allocated for the thread stack.

The icon and name come from the Icon and FriendlyName registry values.

NET Page instances just became long-lived objects.

Likewise, you can imagine scenarios where I might want information on traffic, f lights, weather, financial transactions, and so on.

If a finalizer is empty or simply nulling out references to child objects, remov e it.

Leaking Unmanaged Heap MemoryIf total memory use is increasing, but logical thre ad count and managed heap memory is not increasing, there is a leak in the unman aged heap.

If you're dynamically generating MSIL using System.

If an app is interoperating with unmanaged code, step through the code and exami ne memory usage before and after the unmanaged call to verify that memory is bei

ng reclaimed properly.

NET as an example, but the same type of problem can occur in any application. Treatment Options for Heartburn There are several remedies available to treat heartburn.

The unit also offers Menu, Left, Right, Up, Down, and Enter buttons. exe app that also comes with the SDK.

He is a Microsoft MVP for Solutions Architecture and received his Masters degree from Harvard University.

We will examine some common causes for leaks in the unmanaged heap, including interoperating with unmanaged code, aborted finalizers, and assembly leaks.

Details about the SCF XML schema can be found at [windowssdk](#).

When an OS process is shut down, its resources will be recovered by the operating system.

These types are implemented in the Microsoft.

Gadget Installation When developing a SideShow gadget, you must first create a GUID for it; this becomes the gadget's ID and Windows Vista uses this ID to interact with the gadget.

If a finalizer is empty or simply nulling out references to child objects, remove it.

These auxiliary display devices can come in all kinds of shapes and sizes with varying capabilities.

Some will offer buttons allowing navigation of the cached data.

For this reason, non-UI gadgets should immediately check whether another instance is currently running and, if so, additional instances should just kill themselves.

By default, the XmlElement name used by the XmlSerializer is the name of the class.

If a finalizer is empty or simply nulling out references to child objects, remove it.

For security reasons, however, by default a newly installed gadget is not allowed to communicate with any devices.

CodeDom can be used to generate MSIL on the fly.

Examine how the application uses memory and specifically the types of objects that are on the large object heap using tools like the CLRProfiler.

Once the gadget is installed, users can open Control Panel to configure the gadget and connect it to whatever hardware devices they desire.

Some may offer a headphone jack allowing you to listen to music or video that has been downloaded into its memory.

Just because an application is managed doesn't mean you can throw good software engineering practices out the window and count on the GC to perform magic.

Although not recommended, a finalizer could do something silly such as logging to a database or calling Thread.

If the user terminates the application, the information remains on the device and can be accessed when the computer is turned off.

Conclusion In this article, I have covered the goals of the Windows SideShow feature and explained in depth how an end user interacts and configures the gadget.

Our lifestyle habits, from the way we dress to the way we sleep to the what and when we eat, can determine how frequently we suffer from acid reflux, and how severe those episodes will be.

This becomes even more costly because objects surviving a collection are promoted to the next generation, which can lead to a midlife crisis.

It's a digestive problem that occurs when stomach acid comes into contact with the lining of the esophagus, causing irritation.

You're suffering from severe heartburn.

Content All gadgets push content down to a device.

The object has survived a garbage collection and hence is promoted a generation.

Most people suffer from heartburn occasionally, usually after a meal.

A gadget can also be marked as online-only, meaning that the user can only interact with the gadget on the device if both the computer and the gadget on Windows

are running.

NET Internals: Tailor Your Application by Building a Custom Forms Designer with

The following is a list of causes or underlying conditions that could possibly be the cause heartburn.

If a gadget that is under its minimum wants more memory, it can take that memory from any gadget that is over its minimum.

It has also been found that asthmatics are twice as likely to have GERD as non-asthmatics.

Treatment Options for Heartburn There are several remedies available to treat heartburn.

For example, imagine a Windows Forms application that the user invokes via Windows Explorer.

Each of these displays could show similar or different kinds of information.

A UI gadget is an application the user runs and interacts with.

NET Framework, security, and enterprise application development.

While a gadget is running, it will receive notifications from Windows indicating when the user has added or removed a device from the gadget via the control panel.

The old assembly will no longer be used, but there is no way to evict it from memory, short of unloading the AppDomain in which the assembly was loaded.

The query is page-specific and based on query-string parameters.

, A part of The New York Times Company.

After being awakened, the computer will stay awake until the machine has been idle for the amount of time specified using the machine's Power Options Control Panel applet.

Windows doesn't employ any sophisticated algorithm here; it simply invokes all the registered gadgets.

For example, imagine a Windows Forms application that the user invokes via Windows Explorer.

exe for each device driver.

NET Page instances just became long-lived objects.

This can be disastrous as more and more memory is leaked over time.

The basic strategy is to determine how to reduce the application's reliance on temporary large objects, which are causing the gaps in the large object heap.

Our lifestyle habits, from the way we dress to the way we sleep to the what and when we eat, can determine how frequently we suffer from acid reflux, and how severe those episodes will be.

Conclusion I have discussed a variety of problems in .

This becomes even more costly because objects surviving a collection are promoted to the next generation, which can lead to a midlife crisis.

A single computer can have multiple SideShow devices connected to it simultaneously.

When the lower esophageal sphincter is not functioning properly, there is a back flow of stomach acid into the esophagus, and can be a sign of gastroesophageal reflux disease, or GERD.

For others, heartburn occurs more often, and is considered chronic.

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A UI gadget is an application the user runs and interacts with.

When the lower esophageal sphincter is not functioning properly, there is a back flow of stomach acid into the esophagus, and can be a sign of gastroesophageal reflux disease, or GERD.

SideShow and the Microsoft.

Causes of Heartburn You've just enjoyed a big meal and are relaxing in front of the TV when it happens.

Let's now look at dynamic code generation leaks, and specifically XmlSerializer leaks, in more detail.

Furthermore, you can use the remote control in order to view the TV guide data and schedule recordings.

It is hurting performance by needlessly promoting the object to an older generation.

ion, making them more expensive to clean up.

UI gadgets may also want to ensure that only one instance is executing to prevent each application from clobbering data sent to the device by another instance. A UI gadget is an application the user runs and interacts with.

So, Windows Vista allows the user to configure when and how often the computer should wake itself up and run the gadget.

Another technique introduced in .

For example, when a meeting is imminent, I need to know the time and place right now.

Cholesterol ResourcesManage Your CholesterolWhich Fats Are Healthy?

Also, a non-UI gadget would normally terminate itself when the user has disconnected all devices from it.

When the lower esophageal sphincter is not functioning properly, there is a back flow of stomach acid into the esophagus, and can be a sign of gastroesophageal reflux disease, or GERD.

UI gadgets may also want to ensure that only one instance is executing to prevent each application from clobbering data sent to the device by another instance. A UI gadget is an application the user runs and interacts with.

When we make changes in our lifestyles, we are able to have some control over these heartburn episodes.

To allow the user to remain unaware of non-UI gadgets, Windows offers a mechanism that can automatically invoke non-UI gadgets without the user being involved.

If the upper esophageal sphincter doesn't function properly, acid is allowed into the throat and voice box.

Despite the name, heartburn has nothing to do with the heart.

If you suffer from GERD, your lifestyle habits can have a huge impact.

CodeDom, check whether you regenerate code.

This means that the GC can reclaim the memory once the last reference to the DynamicMethod goes out of scope.

Using a DynamicMethod, MSIL op codes are explicitly emitted to define the method body, and then the DynamicMethod is invoked either directly via DynamicMethod.

If a garbage collection happens during the remote call, the entire graph is marked reachable and is not collected.

So the GC is collecting the Thread object, but not the actual managed thread.

x, the only solution was to tear down the process and start again.

Fortunately this example has a simple solution.

To help developers test their gadget code, the Windows Vista SDK ships with a SideShow Simulator application.

A notification consists of an ID number, an icon, a string caption, a string message, and an expiration time.

If you're dynamically generating MSIL using System.

This becomes even more costly because objects surviving a collection are promoted to the next generation, which can lead to a midlife crisis.

So when the GC finds an unreferenced object with a finalizer, it places the object on the finalization queue and moves on.

NET applications that can lead to memory leaks or overconsumption of memory.

Gadgets that the user puts at the top are high priority and are likely to get more memory; gadgets towards the bottom are lower priority and have memory taken away from them more quickly.

Unfortunately, in a hosting situation such as ASP.

Using a DynamicMethod, MSIL op codes are explicitly emitted to define the method body, and then the DynamicMethod is invoked either directly via DynamicMethod.

CodeDom can be used to generate MSIL on the fly.

Your gadget's setup program should create its own registry subkey and set any of the registry values it desires.

On other runs of the application, this is not the case and the memory required is much larger than the memory required for the currently allocated byte arrays.

Examine how the application uses memory and specifically the types of objects that are on the large object heap using tools like the CLRProfiler.

For example, in a Windows Forms application, the main form is created when the a

pplication starts and the application exits when the main form closes.
The device has a home display that shows all the gadgets that are connected to t
he device.
For others, heartburn occurs more often, and is considered chronic.
Device Cache ManagementSince devices will have limited amounts of cache memory a
nd users can have several gadgets connected to a single device, devices need to
manage memory efficiently.
Personally, I find the new Windows SideShow feature very exciting as it offers n
ew ways for users to access and interact with their data.
If the user wants to examine content that has been purged, the device must notif
y the gadget on Windows so that it can push down the discarded content again.
Causes of HeartburnYou've just enjoyed a big meal and are relaxing in front of t
he TV when it happens.
In the main panel is a grid.
The device will then show the notification until it is dismissed by the user or
until the expiration time has elapsed.
If it does, the instance is returned.
There are two main techniques for solving this problem.
This means that the GC can reclaim the memory once the last reference to the Dyn
amicMethod goes out of scope.
By default, the XmlElement name used by the XmlSerializer is the name of the cla
ss.
The basic strategy is to determine how to reduce the application's reliance on t
emporary large objects, which are causing the gaps in the large object heap.
As you can see, each gadget appears with an icon, a name, and optionally some te
xt.
The query is page-specific and based on query-string parameters.
So, Windows Vista allows the user to configure when and how often the computer s
hould wake itself up and run the gadget.
If we forget to null out rooted references, the GC is prevented from efficiently
freeing memory as quickly as possible, resulting in a larger memory footprint f
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s been downloaded into its memory.
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ible.
In the main panel is a grid.
If the user responds yes, the computer powers up.
Each additional grid column represents a SideShow device attached to the compute
r.
The buffer would be allocated on the large object heap.
For example, in a Windows Forms application, the main form is created when the a
pplication starts and the application exits when the main form closes.
As mentioned previously, the GC uses a generational algorithm, which is predicat
ed on the heuristic that if an object has lived a while, it will probably live a
while longer.
The unmanaged heap memory, which is used for its code, JITed methods, and other
runtime data structures, has been leaked.
For example, imagine a Windows Forms application that the user invokes via Windo
ws Explorer.
So the thread is caught in a chicken-or-egg scenario-the thread is waiting for i
tself to terminate.
You only need to register the COM components once on a machine.