

How to Develop Large Scalable JavaScript Applications

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Split your application into multiple
Modules

setup

remove selected

|

new contact

Search...

A



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Toolbar Module

Setting Module

AddNewContacts Module

Search Module

Contact Area Module

ContactList Module

Rules

Each Module developed separately.

Each Module can be
loaded/unloaded from Page

Rules

You can load any module and test it without loading other.

If (at run time,) one module is 'failed' to load. rest modules should work.
there should be minimum side effect in such case

Rules

Each Module developed separately.

Each Module can be
loaded/unloaded from Page

What a module do ?

It do its work perfectly. Think like a 2 IFRAMEs, we can load any type of webpages, both work independently.

Each module will be given one DOM element where it will load/play its functionality.

Rules

Module **MUST** not modify any DOM outside its DOM container.

Lifecycle of Module

Module - start

Create HTML

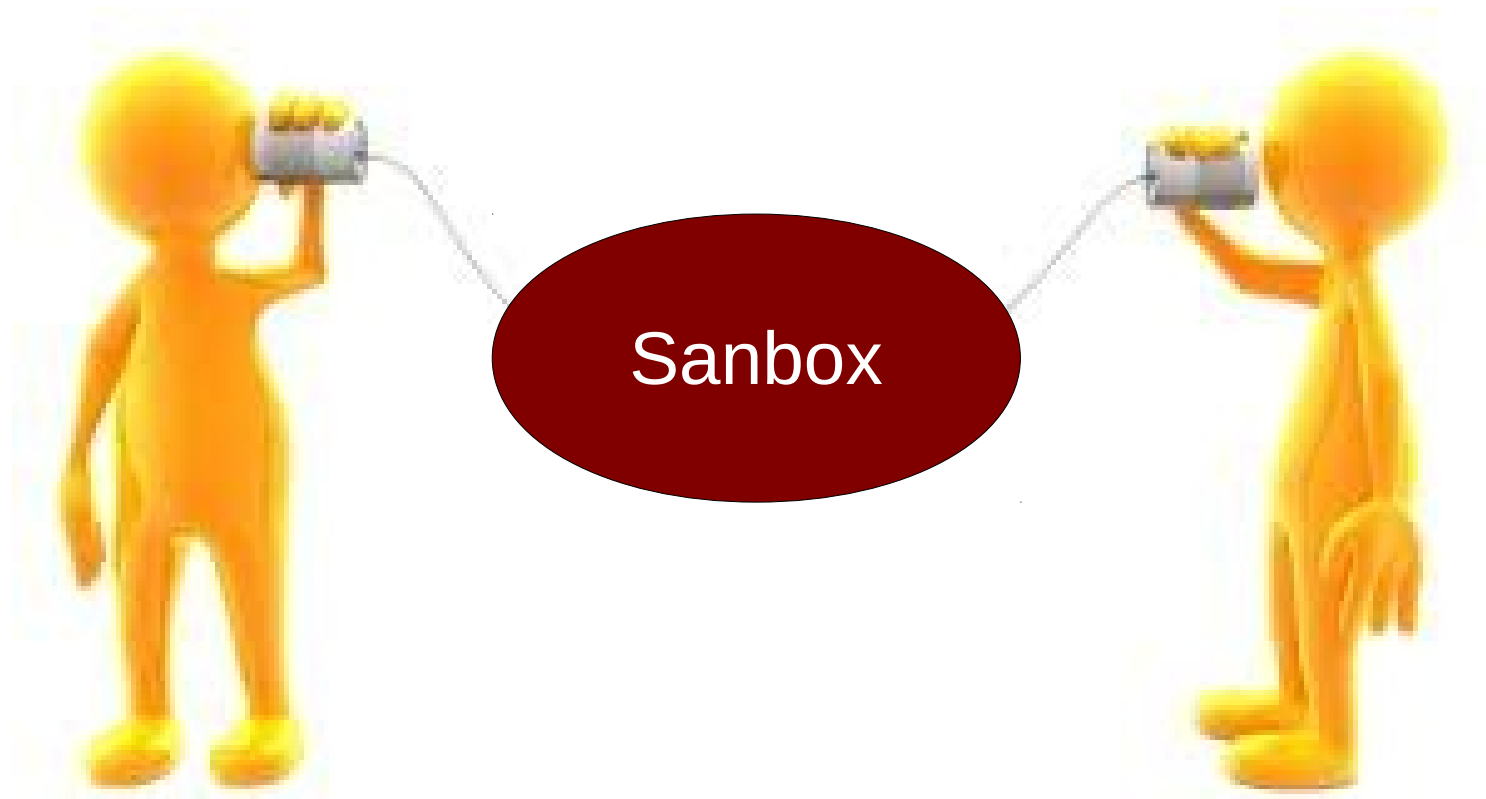
Load Data from Server

Assign Callback

Pub/Sub Callback

Load other Module if any

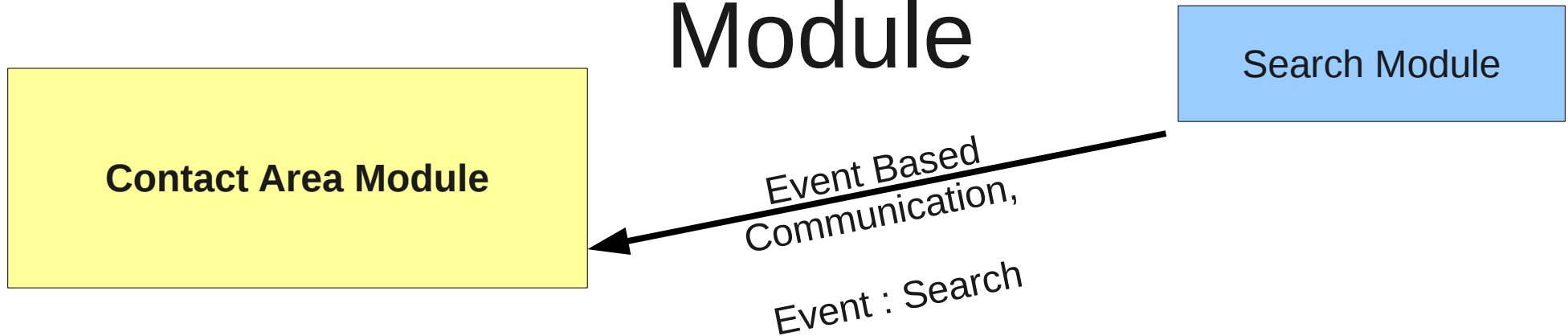
Module - end



Module will talk to each other
using Pub/Sub Architecture,

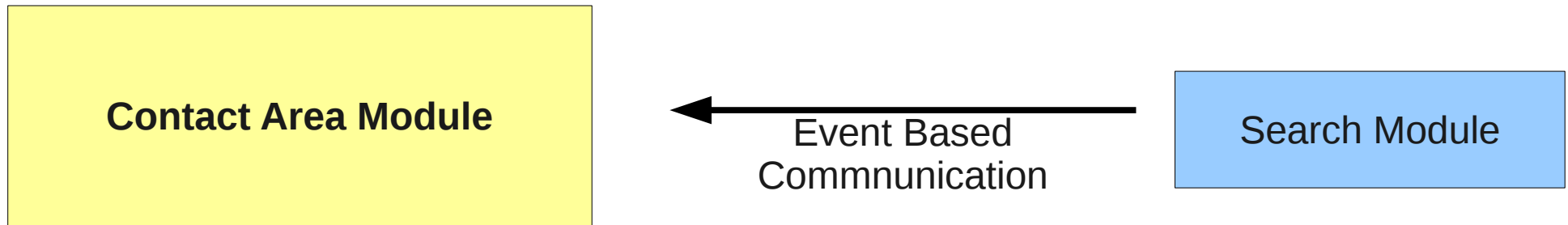
Event based communication.
Via - sanbox

How a Module will Task to Other Module



If user type anything in search module, it will send 'search string' to Contact Area Module.

Example



If Search module fails to load, user will not be able to search.

But Contact Area module must be working perfectly. Both module are loosely coupled.

How a Module will Task to Other Module

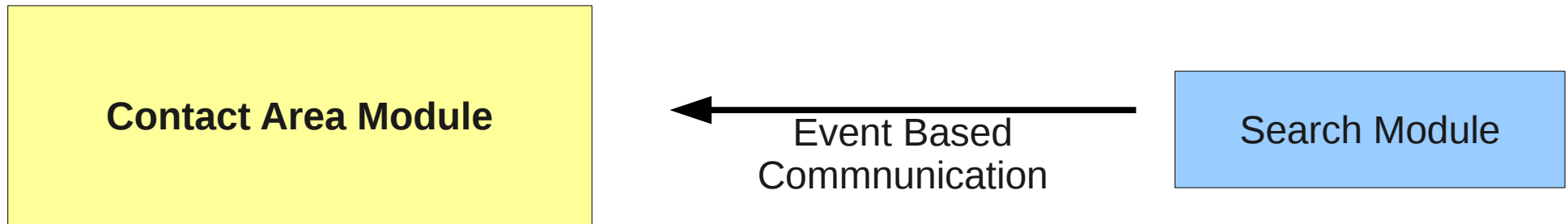


If you add a “new Contact”

AddNewContacts Module send new contact information to server (in Ajax) and get response.

If it get proper response than it, it Send “Reload Event” to Contact Area Module

How module



If Search module fails than, user will not be able to search.

But Contact Area module must be working perfectly. Both module are loosely coupled.

Application Start here

```
<html>
<head>
  <script type="text/javascript" src="./external-libs/jquery-1.7.1.js"></script>
  <script type="text/javascript" src="./external-libs/lb-min-2012-08-04-0752.js"></script>
  <script type="text/javascript" src="./elpaJsRepo/index.js"></script>
  <link rel="STYLESHEET" href="./elpaJsRepo/blogReaderApp/index.css" type="text/css">
  <script type="text/javascript" src="./elpaJsRepo/blogReaderApp/index.js"></script>
  <script type="text/javascript"
src="./elpaJsRepo/blogReaderApp/blogDisplayPanel/index.js"></script>
  <script type="text/javascript" src="./elpaJsRepo/blogReaderApp/navigator/index.js"></script>
  <script type="text/javascript" src="./elpaJsRepo/blogReaderApp/footer/index.js"></script>
  <script type="text/javascript" src="./elpaJsRepo/blogReaderApp/header/index.js"></script>

  <script type="text/javascript">
    $(function){
      var application = new lb.core.Module("applicationContainer",
elpaJsRepo.blogReaderApp);
      application.start();

    };
  </script>

</head> <body> <div id="applicationContainer"></div> </body> </html>
```


Who will initiate this module

```
elpaJsRepo.blogReaderApp = function(sandbox){
  var $ _ = commonLbConstructor;

  $ _ .prototype = {
    start: function(){
      this.initHTML();
      this.loadModules();
    },
    initHTML: function(){
      this.$ .append('\
        <div class="footer" id="'+ this.id +' _ footer"></div>\
      ');
    },
    loadModules: function(){
      this.footerModule = new lb.core.Module(this.id + " _ footer",
elpaJsRepo.blogReaderApp.footer);
      this.footerModule.start();
    }
  };
  return new $ _ (sandbox);
}
```

Coding – How to create a module ?

```
elpaJsRepo.blogReaderApp.footer = function(sandbox){  
  
    var $_ = commonLbConstructor ;  
  
    $_.prototype = {  
        start: function(){  
            this.initHTML();  
  
        },  
        end: function(){  
  
        },  
        initHTML: function(){  
            this.$.append("<p>THIS IS FOOTER PANEL</p>");  
        }  
    };  
    return new $_(sandbox);  
};
```

Summery

A Module loads in an EMPTY div element.

Ex `<div id="applicationContainer"></div>`

Now you can load module in this container using,

```
var application = new lb.core.Module( "applicationContainer",  
    elpaJsRepo.blogReaderApp);  
application.start();
```

Or Simple – `(new lb.core.Module(<id>, <function>)).start();`

Using this, start function will be executed

Inside the module -

`this.$` 'is equal to' `$("#applicationContainer");`

So that you can perform DOM operation on the container element

Sending Events

Subscribe – Module 1

```
this.sandbox.events.subscribe(  
    {event: 'onBlogLinkSelected'},  
    function(args){  
        self.loadBlog(args.value);  
    }  
);
```

Publish – Module 2

```
this.sandbox.events.publish({event: 'onBlogLinkSelected', value: $(this).data("blogid") });
```