The following are explanations of the NOTEs in the code:

## NOTE 1

Facebook needs to include its own specialized JavaScript, including the definition of fbjs sandbox, in order to render developer script.

## NOTE 2

Remember the **\$rewrite\_attrs** element from the earlier FBML initialization flow? FBML rewrites attributes in this list to Facebook-specific functionality; this is really part of FBJS. So onclick here would activate other elements in the page that would be inactive until a user action took place.

# NOTE 3

Notice how elements within both the HTML and the script are prefixed with the application ID of the application. This means a developer call to alert() would become a call to app1234567\_alert(). If Facebook's backend JavaScript allowed this method in this context, this would be routed ultimately to alert(). If not, this would be an undefined call. Similarly, this prefixing effectively namespaces the DOM tree, so changes to parts of the document are limited to those parts defined by the developer. Similar sandboxing techniques allow developers to contribute limited-scope CSS as well.

#### NOTE 4

Facebook provides specialized JavaScript objects such as Ajax and Dialog, designed to enable (and often improve) common scenarios. For example, requests made through the Ajax() object are actually able to obtain FBML as results, so they are redirected through a proxy on the Facebook domain, where Facebook does online FBML-to-HTML transformation.

Enabling FBJS requires changes to FBML, specialized JavaScript, and server-side elements such as the AJAX proxy to work around the limitations of the application web architecture, but the results are powerful. Developers then enjoy most of the capabilities of JavaScript (and even improved capabilities, such as FBML-enabled AJAX), and the Platform enforces the application content to deliver the controlled experiences users expect on Facebook, through entirely technical means

# **Service Improvement Summary**

Solving some of the remaining problems created by our new conception of the social n-tier, we've again improved our service architecture with the newly added COOKIE and FBJS items in Figure 6-6.