Lash-Ups

A Toolkit for Location-Aware Mash-Ups

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Using A Lash-Up

1 Click
Open the Lash-Up Client on the mobile phone

Read 2
Peruse the list of location-relevant Lash-Ups

3 Select
Choose the most relevant Lash-Up

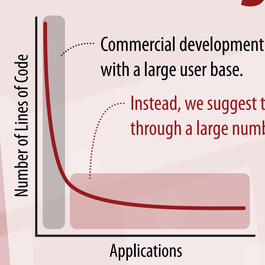
What Are Lash-Ups?

Lash-Ups are location-aware mash-ups of web content for mobile devices.

The Lash-Up Toolkit makes writing Lash-Ups easy by providing:

- An API that makes it easy for programmers to integrate a user's location information into a Lash-Up
- A common distribution method that makes it simple for users to find and access Lash-Ups relevant to their location

Hacking the Long Tail

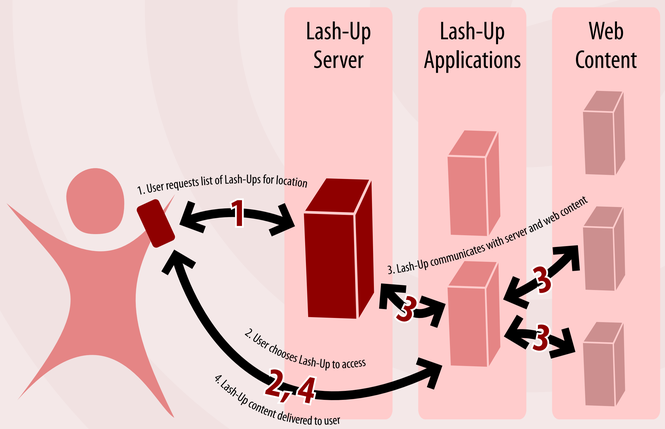


Commercial development efforts typically target a few large applications with a large user base.

Instead, we suggest that location-aware computing is more likely to succeed through a large number of small applications targeted at specific locations and tasks.

Rather than supporting the development of the next "killer app", the Lash-Up Toolkit specifically addresses the needs of development within the long tail of the application space, allowing the creation of a *killer ecology*.

System Architecture



Why Lash-Ups?

Lash-Ups make sense for four primary reasons:

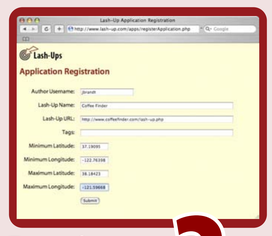
- Location-aware computing is more likely to succeed through a killer ecology of many small applications rather than a few large applications.
- These applications need to be kept up to date, which is more manageable in a user-supported development community.
- Many applications simply consist of providing pre-existing information in a useful location, which matches the mash-up paradigm perfectly.
- Web delivery of applications is straightforward and ubiquitous, and the programming model is familiar to a large number of programmers.

Programming A Lash-Up

Find 1
Locate web services to use in the Lash-Up

2 Code
Write a few lines of code using the Lash-Up API to glue content together with location information

```php
<?php
// get the user's location (GSM cell tower) from GET request
$cell_id = $_GET['CellID'];

// convert the location to lat/lng coordinates using Lash-Up API Call
$xml = simplexml_load_file("http://www.lash-up.com/api/getLatLng.php?CellID=$cell_id");

if (!is_null($xml->record[0])) { // we got a response from Lash-Up Server

  // pull lat/lng out of response
  $lat = $xml->record[0]->lat;
  $lng = $xml->record[0]->lng;

  // format the search string
  $location = urlencode($lat . ", " . $lng);
  $href = "http://www.google.com/xhtml?q=Coffee&near=$location&site=local&hl=en&btnG=Search";

  // redirect the user to the search page
  header("Location: $href");
  exit;

} else { // no lat/lng available from the Lash-Up Server, apologize
  echo "<html><body><p>Sorry, no location information available.</p></body></html>";
}
?>
```



Register 3
Tell the Lash-Up Server about the new Lash-Up and specify the locations where the Lash-Up is useful

4 Tag
Use a cell phone to tag places with location information (or, rely on a community of users to do this for you)