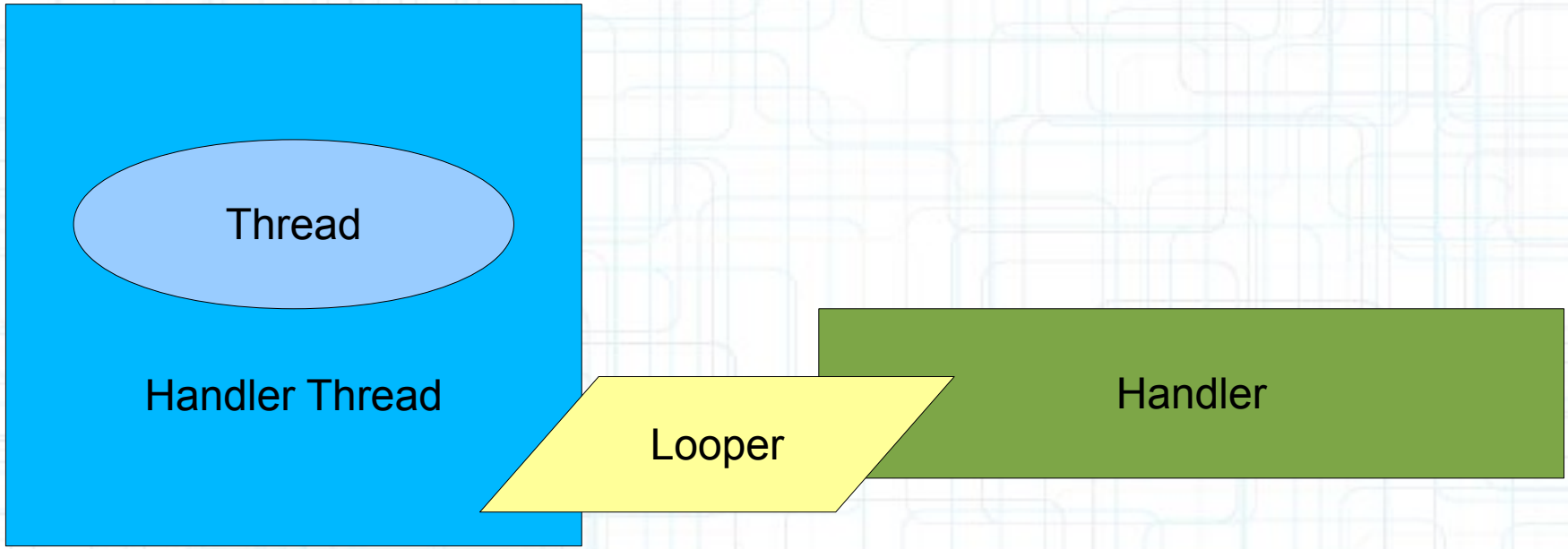
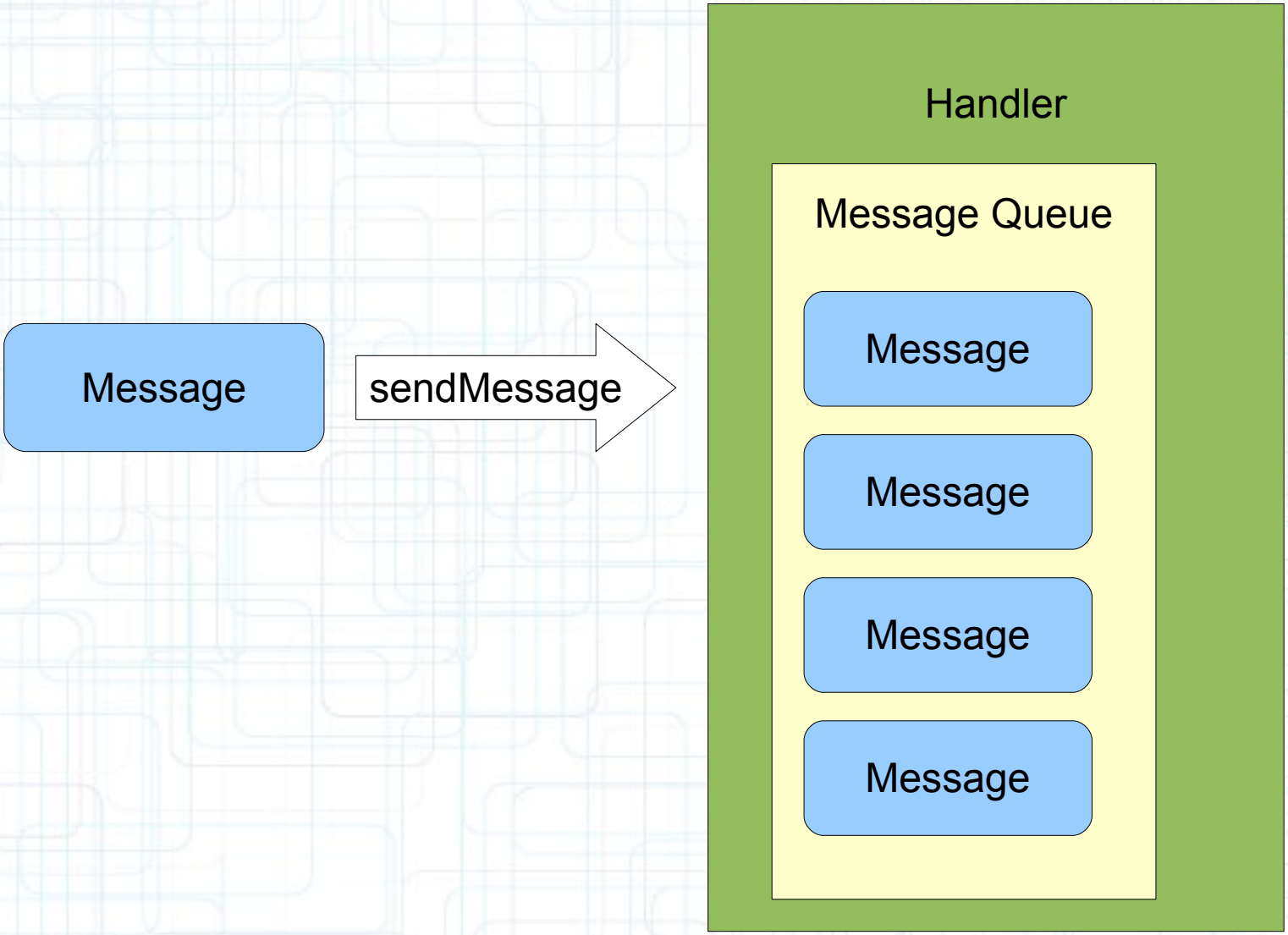
Handler Howto

(by Tobias Fiebiger)


Thread
Handler Thread
Looper
Handler


Handler
Message Queue
Message
Message
Message
Message
Message
sendMessage

Background Handler Class

```
private class BackgroundHandler extends Handler {

    public BackgroundHandler(Looper looper) {
        super(looper);
    }

    @Override
    public void handleMessage(Message msg) {
        // do heavy work here
    }
}
```

Foreground Handler Class

```
private class ForegroundHanlder extends Handler {
    public ForegroundHanlder() {
        super(Looper.getMainLooper());
    }

    @Override
    public void handleMessage(Message msg) {
        // handle ui operations here
    }
}
```

Instanciate Handler(s)

```
worker = new BackgroundHandler(
    ThreadTool.getInstance().getBackgroundLooper());

notifier = new ForegroundHanlder();

worker.sendEmptyMessage(R.id.msg_load);
```

Create Handler Thread

```
backgroundHandlerThread = new HandlerThread(
    "Background Thread", Process.THREAD_PRIORITY_LOWEST);

backgroundHandlerThread.setDaemon(true);
backgroundHandlerThread.start();
```

Notify Foreground Handler

```
Message m = notifier.obtainMessage(what);
m.obj = o;
notifier.sendMessage(m);
```

Or do the notify Stuff nice

```
public void notify(int what, Object o) {
    if (notifier != null) {
        Message m = notifier.obtainMessage(what);
        m.obj = o;
        notifier.sendMessage(m);
    } else {
        Log.i(TAG, "Handler is null");
    }
}
```

Real world Background Handler

```
@Override
public void handleMessage(Message msg) {
  try {
    Log.i(TAG, "Loading Bitmap from Network on Thread: " + Thread.currentThread().getName());
    // Load Bitmap
    String url = "http://farm6.static.flickr.com/5214/5386641369_9b7f305ea3_o.jpg";
    Bitmap b = NetworkTool.getInstance().loadImage(url);
    // Send Bitmap to Foreground Handler
    notify(R.id.msg_success, b);
  } catch (Exception e) {
    notify(R.id.msg_fail, e.getMessage());
  }
}
```

Real World Foreground Handler

```
@Override
public void handleMessage(Message msg) {
  Log.i(TAG, "Notifier called on Thread: " + Thread.currentThread().getName());
  imageView.setVisibility(View.VISIBLE);
  progressBar.setVisibility(View.GONE);

  switch (msg.what) {
  case R.id.msg_success:
    Log.i(TAG, "Obtained Bitmap");
    image = (Bitmap) msg.obj;
    imageView.setImageBitmap(image);
    break;
  case R.id.msg_fail:
    Log.i(TAG, "Obtained Error: " + (String) msg.obj);
    imageView.setImageResource(R.drawable.icon);
    break;
  }
}
```