



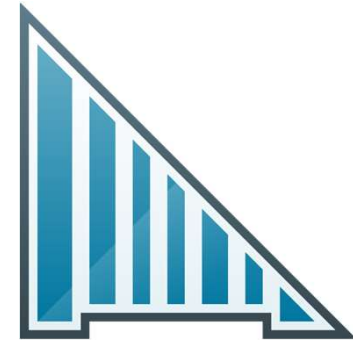
# DataWedge v6.3 and beyond

DevTalk – September 2017

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## Agenda:

- DataWedge?
- The DataWedge API
- History
- DataWedge v6.3 changes
- DataWedge v6.4+ & future Roadmap
- Resources



## DataWedge?

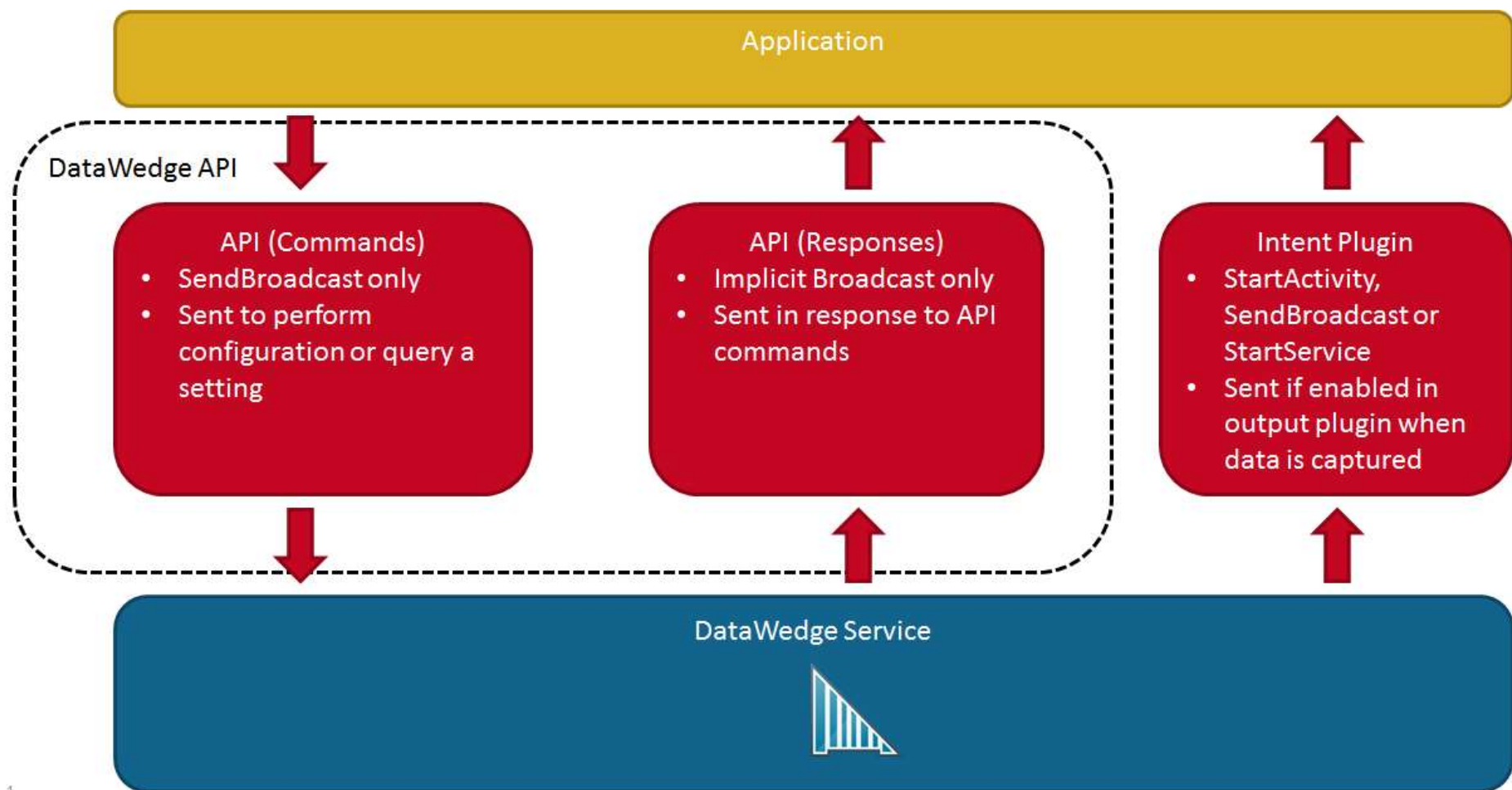
- Zero code technique for acquiring data into your mobile device
- Long history, originally targeting Windows Mobile & CE, now improved for Android.
- Input plugins:
  - Barcode
  - SimulScan
  - Card reader
- Output plugins:
  - Keyboard (wedge mode)
  - **Intent (Do not confuse with DataWedge API)**
  - Internet Protocol (IP)

## Why a DataWedge API?

- DataWedge is very popular, makes sense to invest additional functionality
- Provides runtime configuration of DataWedge
- Provides an alternative to EMDK for controlling the scanner
- Customers asked for it 😊

## The DataWedge API

- Architecture



## The DataWedge API History

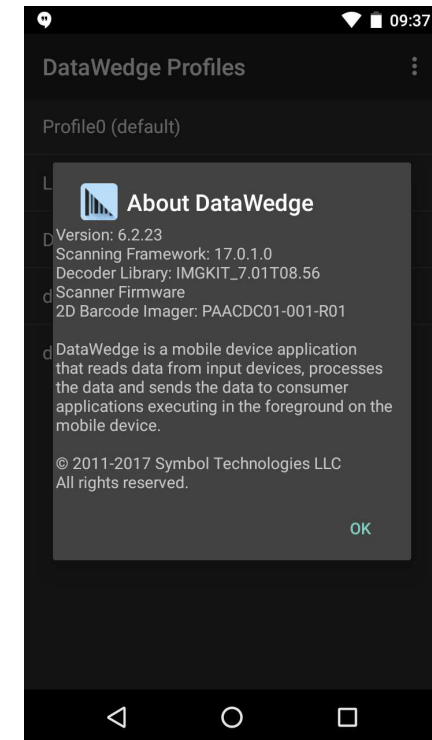
DataWedge 6.0	DataWedge 6.2	DataWedge 6.3
Each API a separate Action	Single action to define entire API. Intent extras now differentiate which function to perform	Unchanged from 6.2. APIs exposed under DW 6.0 now follow this syntax.
APIs to <ul style="list-style-type: none"><li>• Start scanning</li><li>• Enable scanning</li><li>• Enumerate scanners</li><li>• Switch profile</li><li>• Set default profile</li></ul>	APIs to <ul style="list-style-type: none"><li>• Retrieve active profile</li><li>• Update active profile</li><li>• Delete / rename / clone profiles</li><li>• Enable DataWedge</li></ul>	APIs to <ul style="list-style-type: none"><li>• Retrieve version</li><li>• Retrieve scan notifications</li><li>• Create Profile</li><li>• Change Profile (set config)</li><li>• Restore config</li></ul>

**Make sure you target the minimum level for your deployment**

(See next slide)

## DataWedge API Version

- **Retrieving**
  - Launch DataWedge application on device
  - Menu → About
  - Version displayed in the dialog
- **Retrieving (alternative)**
  - Via the Intent API (6.3+ only)
- **Updating**
  - Through OS update for most devices
  - KitKat only: Can be achieved through EMDK Update APK
    - Technically this also used to work on JellyBean but since the latest EMDK release is KK+ only, for all practical purposes DataWedge can only be updated this way on KK devices.



## Sample Code (Soft trigger start) – SET / DO

```
Intent dwIntent = new Intent();  
dwIntent.setAction("com.symbol.datawedge.api.ACTION");  
dwIntent.putExtra  
(  
    "com.symbol.datawedge.api.SOFT_SCAN_TRIGGER",  
    "START_SCANNING"  
);  
sendBroadcast(dwIntent);
```



## Sample Code (Enumerate Scanners) - GET

```
IntentFilter = new IntentFilter();  
filter.addAction("com.symbol.datawedge.api.RESULT_ACTION");  
filter.addCategory(Intent.CATEGORY_DEFAULT);  
registerReceiver(myBroadcastReceiver, filter);
```

```
Intent dwIntent = new Intent();  
dwIntent.setAction("com.symbol.datawedge.api.ACTION");  
dwIntent.putExtra  
("com.symbol.datawedge.api.ENUMERATE_SCANNERS", "");  
sendBroadcast(dwIntent);
```

```
// Broadcast receiver  
ArrayList scanners =  
b.getParcelableArrayList("com.symbol.datawedge.api.RESULT_E  
NUMERATE_SCANNERS");
```

## Demo

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### Datawedge API Exerciser

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#### DataWedge 6.2 APIs

These will work on any Zebra device running DataWedge 6.2 or higher

Active Profile  
DW API Exerciser Profile

---

Select Profile  
Profile0 (default) ▼

---

Select Command  
Delete Profile ▼

New Name  
profile name

SEND

---

Disable / Enable DataWedge  
☒ Enable DataWedge?

SEND

---

#### DataWedge 6.3 APIs

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### Datawedge API Exerciser

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configured settings and restores DataWedge to its factory settings. SEND

---

SoftScanTrigger (6.3)  
START\_SCANNING ▼ SEND

---

ScannerInputPlugin (6.3)  
☒ Enable Plugin? SEND

---

EnumerateScanners (6.3) SEND

---

SetDefaultProfile (6.3)  
Profile0 (default) ▼ SEND

---

ResetDefaultProfile (6.3) SEND

---

SwitchToProfile (6.3)  
Profile0 (default) ▼ SEND









<https://github.com/darryncampbell/DataWedge-API-Exerciser>

# Demo

## Unlisted YouTube URL:

<https://youtu.be/YdKE6BbQd4c>

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10:24

## Datawedge API Exerciser

Scan Data: Scanned data will show here

Scan Source: Scanned source will show here

Scan Decoder: Decoder used will show here

### DataWedge 6.x APIs

These will work on any Zebra device running DataWedge 6.0 or higher. Note the API changed between DW 6.0 and 6.3 and this section demonstrates the original 6.0 API to which future devices should be backwardly compatible.

SoftScanTrigger	
START_SCANNING	<div>SEND</div>
ScannerInputPlugin	
<input checked="" type="checkbox"/> Enable Plugin?	<div>SEND</div>
EnumerateScanners	<div>SEND</div>

## V6.3: Things to watch out for

- APIs changed between 6.0 and 6.3
- API return values are always via implicit broadcast
  - Requires category\_default filter
- Ways to associate the callback with the caller are limited
- No return values from commands, use logcat during debugging
  - Errors might be caused because profile is already associated with an app
- Callback only available for scanner notifications right now
- Profiles come into effect some finite time after launch (milliseconds) but could affect ActiveProfile value
- SetConfig
  - One plugin at a time
  - Specify which scanner you are targeting for the Barcode input plugin
- Changes operate globally
- More discussion here: <http://bit.ly/2vKALZS>

## DataWedge v6.4, v6.5 & future Roadmap

- V6.4: Auto scanner selection
- V6.4: Get DataWedge Status (enabled / disabled)
- V6.5: Intent result codes
- V6.5: Get / Set disabled app list
- V6.5: Switch scanner
- V6.5: Switch scanner params (convenience method?)
- DataWedge API will continue to be developed
- Feedback from the community has been positive
  - Aim to be a viable alternative to SDK development
- “Things to watch out for” on previous slide have been and will continue to be addressed
- Tell us what you think

## Resources

- DataWedge 6.3 blog:
  - <https://developer.zebra.com/community/android/android-forums/android-blogs/blog/2017/06/27/datawedge-apis-benefits-challenges>
- DataWedge API Exerciser (app)
  - <https://github.com/darryncampbell/DataWedge-API-Exerciser>
- Documentation
  - <http://techdocs.zebra.com/datawedge/6-3/guide/api/overview/>
- Official Demo app doc
  - <http://techdocs.zebra.com/datawedge/6-3/guide/demo/>

Questions?

