



```
WebIDL
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                                                                                   interface ConsumedThing {
 interface WoT {
                                                                                       readonly attribute DOMString name;
     Promise<sequence<ConsumedThing>> discover(ThingFilter filter);
                                                                                       Promise<any> invokeAction(DOMString actionName, any parameter);
     Promise<ConsumedThing>
                                      consumeDescription(object td);
                                                                                       Promise<any> setProperty(DOMString propertyName, any newValue);
     Promise<ConsumedThing>
                                      consumeDescriptionUri(DOMString uri);
                                                                                       Promise<any> getProperty(DOMString propertyName);
                                      createThing(DOMString name);
     Promise<ExposedThing>
                                                                                       ConsumedThing addListener(DOMString eventName, ThingEventListener listener);
     Promise<ExposedThing>
                                      consumeDescription(object td);
                                                                                       ConsumedThing removeListener(DOMString eventName,
     Promise < ExposedThing >
                                      consumeDescriptionUri(DOMString uri);
                                                                                                                    ThingEventListener listener);
};
                                                                                       ConsumedThing removeAllListeners(DOMString eventName);
                                                                                                     getDescription();
                                                                                       object
                                                                                   };
                                                                                  WebIDL
EXAMPLE 35: access a Thing by description
                                                                                   interface ExposedThing {
                                                                                       readonly attribute DOMString name;
 WoT.consumeDescription({ /*... valid thing description ...*/ })
                                                                                       Promise<any> invokeAction(DOMString actionName, any parameter);
 .then(function(thing) {
                                                                                       Promise<any> setProperty(DOMString propertyName, any newValue);
   console.log("found " + thing.name);
                                                                                       Promise<any> getProperty(DOMString propertyName);
 });
                                                                                       Promise<any> emitEvent(DOMString eventName, any payload);
                                                                                       ExposedThing addEvent(DOMString eventName, object payLoadType);
                                                                                       ExposedThing addAction(DOMString actionName,
                                                                                                              object inputType,
EXAMPLE 34: Discover Things
                                                                                                              object outputType);
                                                                                       ExposedThing addProperty(DOMString propertyName, object contentType);
                                                                                       ExposedThing onInvokeAction(DOMString actionName, ActionHandler callback);
 WoT.discover("registry", {registry:"http://my.registry.org"})
                                                                                       ExposedThing onUpdateProperty(DOMString propertyName,
 .then(function(things) {
                                                                                                                     PropertyChangeListener callback);
   things.forEach(function(thing) {
                                                                                       ExposedThing addListener(DOMString eventName, ThingEventListener listener);
                                                                                       ExposedThing removeListener(DOMString eventName,
     console.log("found " + thing.name);
                                                                                                                   ThingEventListener listener);
   });
                                                                                       ExposedThing removeAllListeners(DOMString eventName);
 })
                                                                                       object
                                                                                                    getDescription();
```

## Scripting API

### Standardized APIs for IoT Applications

#### API Endpoints

- Consuming (client)
- Exposing (server)
- Discovery

#### Features

- Portable application code
- Language-agnostic
- Vendor-independent
- Asynchronous
- "Least suprise" for developers

# Web of Things at W3C Web of Things Interest Group

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