

# IRM in the Wild

## A Look At IRM in the Wild

- Use/Business Cases Explored
- Architecture Notions

The following table is a working document which reflects the various "IRM in the Wild" use cases the IRM WG is discussing and how each applies to the IRM Principles as they are currently defined.

### Use/Business Cases Explored

Principles	Migration	IoT			Connected Road to /from Car	DNS	Block Chain <small>(e.g., One NameCoin)</small>
		SalesForce	Strong Device Identity (SDID) - <b>Low</b> Computing Power	SDID - <b>High</b> Computing Power			
Is there a role for a Relationship Manager?	Yes	Yes	Yes	Yes	Yes		
Scalable	<b>FULLY</b>	<b>PARTIAL</b> <i>Reality of IoT</i> <i>Raw device data stream, vs. identity (asset token)</i>	<b>FULLY</b> Has to be	<b>FULLY</b> <i>Has to be</i>	<b>PARTIAL</b> <i>Yes - Road handles multiple cars but traffic and road usage is applied</i>	<b>FULLY</b> v4, v6	<b>FULLY</b>
Actionable	<b>PARTIAL</b>	<b>FULLY</b> <i>By the nature of the of the asset token and platform</i>	<b>PARTIAL</b>	<b>FULLY</b>	<b>FULLY</b>	<b>FULLY</b> IANA, Registration	<b>PARTIAL</b>
(Im)Mutable	<b>PARTIAL</b>	<b>FULLY</b> <i>Depends on info available from the device</i>	<b>PARTIAL</b>	<b>FULLY</b>	Push - TBD	<b>FULLY</b> Immutable/Proxy /Forwarding	<b>FULLY</b>
Contextual	<b>FULLY</b>	<b>FULLY</b> <i>Depends on constraints of the device</i> <i>Nothing that excludes this</i>	<b>FULLY</b>	<b>FULLY</b>	<b>FULLY</b>	<b>FULLY</b> <i>Actually provides context</i>	<b>PARTIAL</b>
Transferrable (Delegation)	<b>NONE</b>	<b>PARTIAL</b> <i>As token of "agency"</i> <i>Need to re-mint token (new JWT)</i>	<b>PARTIAL</b> <i>In terms of Ownership NOT Identity Change (Change vs. Transfer)</i>	<b>PARTIAL</b> <i>In terms of Ownership NOT Identity Change (Change vs. Transfer)</i>	<b>NONE</b> - Today <b>PARTIAL</b> - in the Future - when automated vehicles are on the roads	<b>FULLY</b> <i>Bought, Forwarded</i>	<b>FULLY</b>
Provable	<b>PARTIAL</b>	<b>FULLY</b> <i>If HoK (signed JWT via JOSE)</i>	<b>PARTIAL</b> <i>Requires gateway</i>	<b>FULLY</b>	<b>FULLY</b>	<b>FULLY</b> w/HTTPS DNSSEC	<b>FULLY</b>
Acknowledgable	<b>PARTIAL</b>	<b>FULLY</b> <i>Allows it to be assigned, you can show this</i>	<b>PARTIAL</b> <i>As capable as the device is</i>	<b>FULLY</b>	<b>FULLY</b>	<b>FULLY</b> NMAP, other	<b>FULLY</b>
Revocable	<b>PARTIAL</b>	<b>FULLY</b> <i>Delete the token, there is an endpoint for access token status</i>	<b>NONE</b>	<b>FULLY</b>	<b>FULLY</b>	<b>PARTIAL</b>	<b>FULLY</b>  (although of for the right-forgotten)
Constrainable	<b>PARTIAL</b>	<b>PARTIAL</b> <i>From the device perspective - not referring to back-end</i>	<b>PARTIAL</b> <i>Difficult to add constraints - limited options</i>	<b>FULLY</b>	<b>PARTIAL</b>	<b>FULLY</b> Subnets, Domains, etc.	<b>FULLY</b>

## Architecture Notions

Notion	Notes/Comments
Scope it/ Profile	
Bounded for use/links to the real world	SAML, UMA?
Are components a viable approach?	OAuth/JWTs OpenID Connect
At the IdP layer as backend or data store, "contextual identity store"	Can't change the apps Hack the IdP Hack the manager be it the IdP or the AS Is it a rule generator? "Contextual claims compiler" Co-opt the IdP
Human Understandable	
Are there simplifying assumptions?	
IRM provides the context for AuthZ?	
Build up the attributes from IdP in order to meet need for a claim	
Semantic aspects	
Autonomous	
Distributed Ledgers	