What We Had

LET CALL IT IN “2”
2 Scheme

• Version Overview
  o Breaking changes at the major/first level.
  o Compatible at the minor/second level.
  o Potentially breaking fixes at the third/revision level.

• Umbrella Namespace
  o http://www.sifinfo.org/infrastructure/2.x

• Version in XML
  o Version="2.0r1"
2 Pros

• Virtues
  o Compatibility between minor versions.
    ▪ Tested and certified.
    ▪ Robust!
      ▪ Extra’s already ignored do not derail interoperability.
2 Cons

• Problems
  ○ Must inspect the XML (HTTP body) before:
    ▪ Loading the corresponding XML Schema to validate.
    ▪ Know what newer fields may be present.
      ▪ May not be able to function without them.
    ▪ “Version sniffing” is known to:
      ▪ Be prone to breaking.
      ▪ Have security implications.

• Example
  ○ <SIF_Message
      xmlns="http://www.sifinfo.org/infrastructure/2.x"
      version="2.0r1">
What we have

LET’S CALL IT “3”
3 Scheme

- Version Overview
  - Breaking at the major/first level.
  - Breaking at the minor/second level.
  - Compatible a the revision/third level.

- Namespace & Version
  - http://www.sifassociation.org/datamodel/na/3.5
3 Pros

- **Virtues**
  - Some programming tools will automatically load the correct schema and validate.
    - Assuming they have access to the correct schema.
    - Under the hood, it is nearly the same process.
3 Cons

• Problems
  o There is no correct option when instituting breaking fixes shortly after a release.
    ✷ 3.5 & 3.5.1 are supposed to be 100% compatible.
    ✷ Just placing breaking fixes in an errata leaves us with two incompatible instances of 3.5.
    ✷ Going to 3.6 both miscommunicates the level of work and intention of the release and leaves a broken release (3.5) laying around.
  o Still have to look at the XML to get the version number.
  o JSON has no concept of namespaces.
    ✷ An XML namespace declaration isn’t really an attribute.
  o Backwards compatible versions must have a revision number.
What different locales are doing
By Locale

- **Global (Infrastructure)**
  - Ignored the new rules.
    - 3.0.1 was not compatible with 3.0, it fixed it!

- **NA**
  - Follow the rules one way.
    - Published minor release that should be backwards compatible.
    - Published errata, instead of a revision.

- **AU**
  - Follow the rules another way.
    - Publish backwards compatible versions as revisions.
    - Quickly ran into forwards compatibility issues.
What the AU have run into?

• The namespace doesn’t change.
  o No autoloading of the correct XML Schema.
    ▶ SIF Implementation Specification (Australia) 3.4.4
    ▶ http://www.sifassociation.org/datamodel/au/3.4
  o No way to know, if the other side has any concept of the fields you need.
What is changing

THE W3C HAS HEARD OUR CRIES
The big changes

- Kick the version out of the payload/HTTP body!
  - Place the version in an HTTP header.
  - Other information about the payload too (PESC JSON).
- Allow for both side to negotiate compatible versions.
- This is bigger than us:
  - [https://w3c.github.io/dxwg/conneg-by-ap/](https://w3c.github.io/dxwg/conneg-by-ap/)
Where I think this is going...

LET’S CALL IT “4” FOR NOW
4 Scheme

- Version Overview
  - Breaking changes at the major/first level.
  - Compatible at the minor/second level.
  - Potentially breaking fixes at the third/revision level.

- Umbrella Namespace
  - http://www.sifassociation.org/datamodel/na/4.x

- Version and Encoding in HTTP header
4 Pros (Expected)

- Increased clarity to the market.
  - Major, minor, and revision releases all have their proper place.

- Payload independent.
  - We can coordinate what to do with 4.3/WA/CSV, if we want to.

- Best validation experience yet.
  - Know the rules before you touch the payload.

- Clear backwards compatibility mechanism.

- Allows for forward compatibility for the first time!
4 Cons (Expected)

- Complex Header
  - Needs to be profiled/binded to SIF.
  - Poor initial tool support.
Outcomes

- We will pursue the 4 scheme before
  - The second release of NA 4.x
  - The second release of the NZ data model

- Tougher transitions
  - Infrastructure, but they haven’t followed the rules anyway
    - 3.0.1
    - 3.2.1
  - AU 3.4.x
    - Source of the new Infrastructure feature
    - Need to gauge buy-in