Following are some standards we recommend:

Always pretend HlyGrail (486c79477261696c) to the front of your IPF

To be backward compatible when HlyGrail is detected the software will assume it is using the algorithm. First it will look to see if it is a domain name or ID. If so it will be able to identify the website, CID, or other ID.

Next it will try to read the IPF as text if the document is presented. If it cannot read it, then the software will try to decrypt using the address before trying to read as text.

Finally, it will try to read as JSON plain or decrypt with the address.

HlyGrail Types

Types are unlimited so the reading software must know how to interpret the file based on the type. If using JSON, the software can look for keypairs it knows and ignore the rest. Other types can be included in our types.

Independent IPF

Include the Address as a watermark or in the metadata of the media.

Preferably create and IPF to include the address, attributes, and ownership.

Domain Name or ID

```
{
 "HlyGrail": "DomainName",
 "addressIPF": "ADDRESS",
 "owner": "OWNER",
 {"contact":
  {
   "phone": "Your Phone Number",
   "email": "Your Email",
   "address": "NONE",
   "other": "Whatever you want to put here."
  }
 },
```

```
 "addressDomain": "Your domain address being protected",
 "domainName": "Your domain name or ID being protected",
 "extension": "ALL"
 "license": "https://hlygrail.com"
}
```

Attribute IPF – Fully Modifiable and protected NFT. Below is an example. You can add more Media to the array and more Assets to the array. The number of files is not needed but helps program usage.

```
{
 "HlyGrail": "attributeIPF",
 "addressIPF": "ADDRESS",
 "owner": "OWNER",
 "title": "Icon and 3d Character",
 "description": "My fabulous Metaverse Character with green eyes.",
 "numberFiles": "2",
 {"media": [
  {"title": "Icon",
   "description": "2D image",
   "fileLocation": "IPFS",
   "fileHash": "CID",
   "filetype": "jpg"
  },
  {"title": "3D Character",
   "description": "3D model",
   "fileLocation": "https://mywebsiteapi.com?3dcharacter",
   "fileHash": "HlyGrailxxxxxxxxxxxxxxxxxxxxxxx",
   "filetype": "obj
  }
 ]},
 {"assets": [
  {"title": "Health",
  "description": "Character Health",
  "health": "100",
  {"title": "Weight",
  "description": "Weight in pounds under Earth Gravity",
  "weight": "450"
 ]},
```

```
  “license": “https://hlygrail.com”
}
```

Other standards can be included in the IPFS such as ERC-721.

```
{
  “HlyGrail”: “ERC-721”,
  “addressIPF”: “ADDRESS”,
  “owner”: “OWNER”,
  “title”: “Asset Metadata”,
  “type”: “object”,
  “properties”: {
    “name”: {
      “type: “string”,
      “description”: “Identify the asset for this NFT”,
    },
    “description”: {
      “type”: “string”,
      “description”: “Describes the asset for this NFT”,
    },
    “image”: {
       “type”: “string”,
       “description”: URI pointing to the resource with mimi type etc.”,
    }
  }
“license”: “https://hlygrail.com”
}
```

IPF Patent – This is the most often used for larger Intellectual Property such at patents requiring many documents of varied types, locations, security, etc. This can have any number of media, storage locations, and security.

```
{
  “HlyGrail”: “IPF”,
  “addressIPF”: “ADDRESS”,
  “owner”: “OWNER”,
  “title”: “Title of Patent (Library of Congress)”,
  “description”: “This protects every document ever written”,
  “numberFiles”: “2”,
  {“media”: [
    {“title”: “Icon”,
      “description”: “Birthday Photo”,
```

```
      “fileName”: “birthday2016”,
      “filetype”: “jpg”
      “fileLocation”: “IPFS”,
      “fileHash”: “CID”,
      “fileSize”: “123,456 bytes”,
      “Encrypted”: “AES256 assumed with addressIPF”,
      “hashType”: “SHA256 assumed”
     },
     {“title”: “File2”,
      “description”: “My wonderful song”,
      “fileName”: “mysong”,
      “filetype”: “mp3”
      “fileLocation”: “https://myhomepage/mysong.mp3”,
      “fileHash”:
“CCF293B52C9E00A05ECD9D8BD9975C1DEB1E54A80C0263C1206E072BDB
B314BB”,
      “fileSize”: “7,123,456 bytes”,
      “Encrypted”: “No”,
      “hashType”: “NA”
     }
    ]},
  "license": “https://hlygrail.com”
}
```


Check back often for other standard types.