mediaspot.io®
Billing Cloud Model

Plan:

1) Prerequisites of a good pricing model computing
2) Data deserves models to run
3) Model presentation
    1) Stages, like cost centers
    2) Appliers
4) Model run example and demo

mediaspot.io®
Billing Cloud Model

1) Prerequisites of a good pricing model computing.

Some of sementic:

- « Applier » is a part of generic code ran against parameters on a dataset

- This document only speak about SaaS, and not the subscription fees or support
- Data is the centric way to compute correct pricing depending of key parameters
- Cloud pricing model should be clearly exposed on contracts to customers to avoid payment surprises
- Think about all costs values (such as storage, in/out data Iops, file movments, transcoding, any computing resource, machine processing time)
- Computing is impossible without data and without code
    - No way to try this through an Excel and some piece of data exports
- Each bill row need to be linked with his proof of computing : no possibility of errors or cheat
- The computing result need to be audited frequently and randomly to verify data consistency
- Each new model applier need to be fully tested and debugged with consistant dataset (large amount of data)

How present UX:

- Precise compute can't be done before ended and fixed data
- That means we can't show precise prices in front of any orders, can be computed approximately
- In term of business: we shouldn't show price everywhere on UI. That's scary for user, and we could lost some charged actions (like a media share).
    - Imagine we show price « 1,19€ » on each media share popup: user will be afraid and won't do the action

Monthly computing:

- As AWS or any cloud provider: a monthly recap need to be generated for customer, with each cost-center detailled.
- It's quite impossible to get all data before end of operation, like machine processing time!

mediaspot.io®
Billing Cloud Model

2) Data deserves model to run.

- Large data set
- Aggregated data:
  - Infos about files (bitrate, resolution, size, data of usage etc.)
  - Infos about assets (duration, type, class etc.)
  - Infos about workflows
  - Infos about orders (processing stack, like start/end dates)
  - Etc.
- Data make algorithms possible
- On huge volume, round() can impact severely business

mediaspot.io®
Billing Cloud Model

3) Model presentation.

3 main stages:

- **Ingest (input):**
  - **Need to bill depending of:**
    - **Amount**
    - **Processing:**
      - **Depending of media duration: transcode & analysis:**
        - **Machine time**
        - **Third-part cost**
      - **Base price in case of Subtitle/Image etc.**
    - **Class (Mezzanine specific case)**
- **Storage (middleware):**
  - **Need to bill depending of:**
    - **Hot storage (StandardAndWork ones) : File Size**
    - **Cold storage (Archive ones) : File Size**
- **Order (output):**
  - **Need to bill depending of:**
    - **Amount**
    - **Complexity (processing stack) : transcode (media duration, machine time & third-part cost)**
    - **Delivery Size (IO transfers)**
    - **Restore Size (File movments)**
  - **Includes media shares in case of processing (merged on orders)**

mediaspot.io®
Billing Cloud Model

3) Model presentation.

Applier functions:

- **Defines a type of price computing with input parameters**
- **Generic and can be applied on any item**
- **Used on combinations, many models can be applied in //**

Types of appliers:

- `PriceModelPerMediaDuration`
- `PriceModelPerDeliverySize`
- `PriceModelPerSourceSize`
- `PriceModelPerSourceRestoreSize`
- `PriceModelPerRestoreFromArchiveOnly`
- `PriceModelTranscodePerMinute`
- `PriceModelMediaAnalysisPerMinute`
- `PriceModelIngest`

Any new model, depending of a new pricinp concept can be designed. Need to discuss about:

- **Data set (on which data we need to apply it)**
- **Input parameters to drive compute**
- **The output of applier**

VDM
Video Digital Multimedia

mediaspot.io®
Billing Cloud Model

3) Model run example and demo.

Config:


```
{
    "id": 933121,
    "pid": 1,
    "objectName": "LOOK OF LOVE (THE) Mezz - English - Audiodescription - Theatrical Version - 2.0 + 5.1 - 24fps",
    "infos": "System Play",
    "dateIn": "2022-10-17T15:48:18.136Z",
    "dateOut": "2022-10-21T14:51:12Z",
    "machineProcessingTime": null,
    "restore": {
        "sizeInBytes": 0,
        "jobCount": 0,
        "jobCountFromArchiveOnly": 0,
        "jobFileIdsFromArchiveOnly": []
    },
    "deliverySizeInBytes": 7020795151,
    "sourceSizeInBytes": 7020795151,
    "mediaDurationInSeconds": 6058,
    "videoProfile": null,
    "objectType": "Audio",
    "objectClass": "Mezz",
    "videoRender": null,
    "priceModels": [
        {
            "type": "VDM.AirLab.BillingService.Api.ManagerApi.Types.PriceModelTranscodePerMinute",
            "price": 12.0
        },
        {
            "type": "VDM.AirLab.BillingService.Api.ManagerApi.Types.PriceModelMediaAnalysisPerMinute",
            "price": 0.0
        },
        {
            "type": "VDM.AirLab.BillingService.Api.ManagerApi.Types.PriceModelIngest",
            "price": 20.0
        }
    ],
    "price": 32.0,
    "processingTime": "3.23:02:53.8640000"
}
```


VDM
Video Digital Multimedia

mediaspot.io®
Billing Cloud Model

3) Model run example and demo.

Result:


```
{
    "$type": "VDM.AirLab.BillingService.Api.ManagerApi.Types.PriceModelMediaAnalysisPerMinute, VDM.AirLab.BillingService.Api",
    "videoProfiles": [
        {
            "resolution": "SD",
            "pricePerMinute": 0.24
        },
        {
            "resolution": "HD",
            "pricePerMinute": 0.44
        },
        {
            "resolution": "UHD",
            "pricePerMinute": 0.89
        },
        {
            "resolution": "FourK",
            "pricePerMinute": 0.89
        },
        {
            "resolution": "Unknown",
            "pricePerMinute": 0.12
        }
    ],
    "specialEffectFactors": {
        "hdr10": 1.55,
        "hdrDoVi": 2.5,
        "frameStdConvert": 1
    },
    "machinePricePerMinute": 0.00001
}
```


VDM
Video Digital Multimedia