

Supplement XXX

# APPLICATION REQUEST

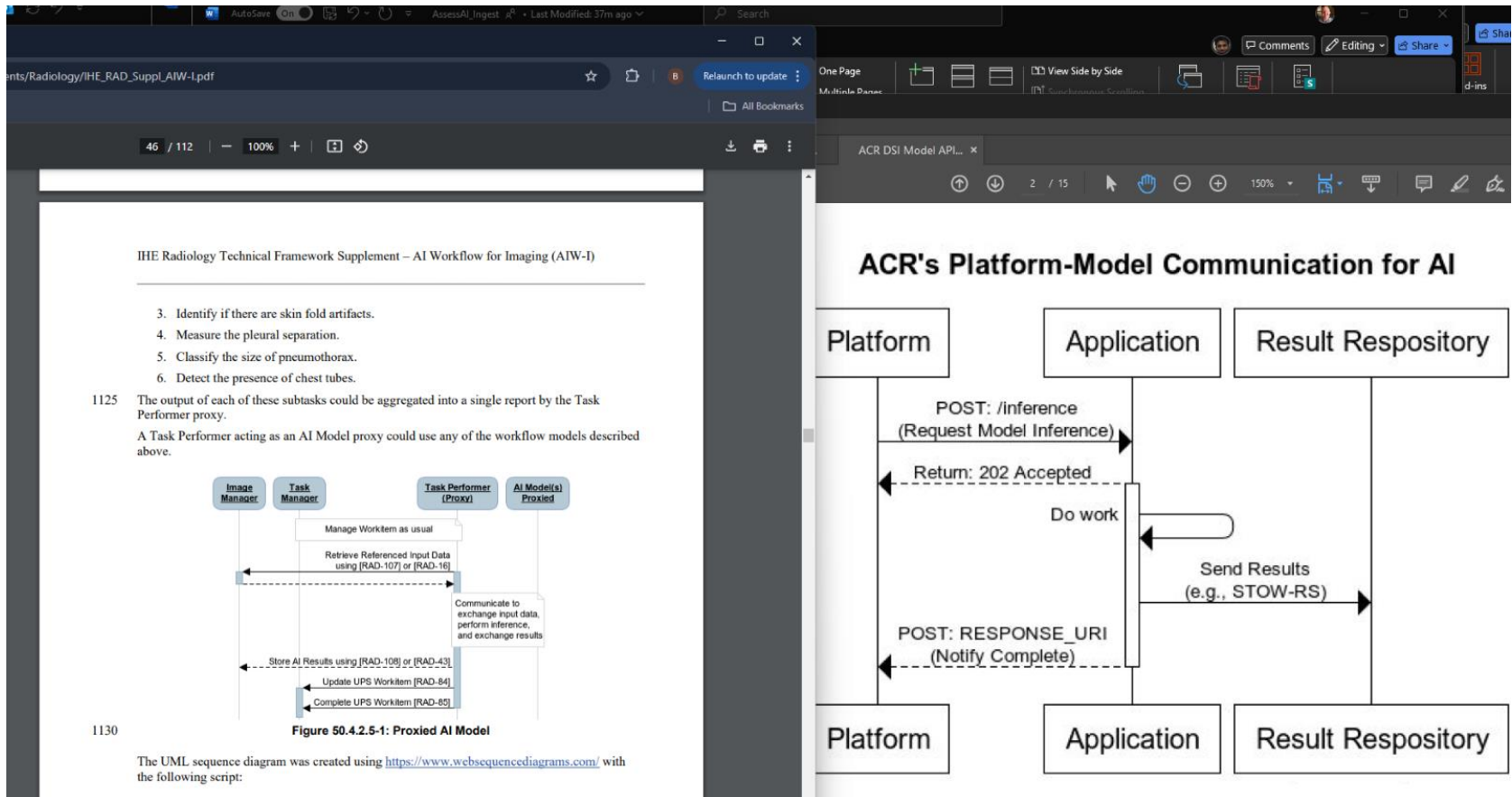
## WG-23

# Background

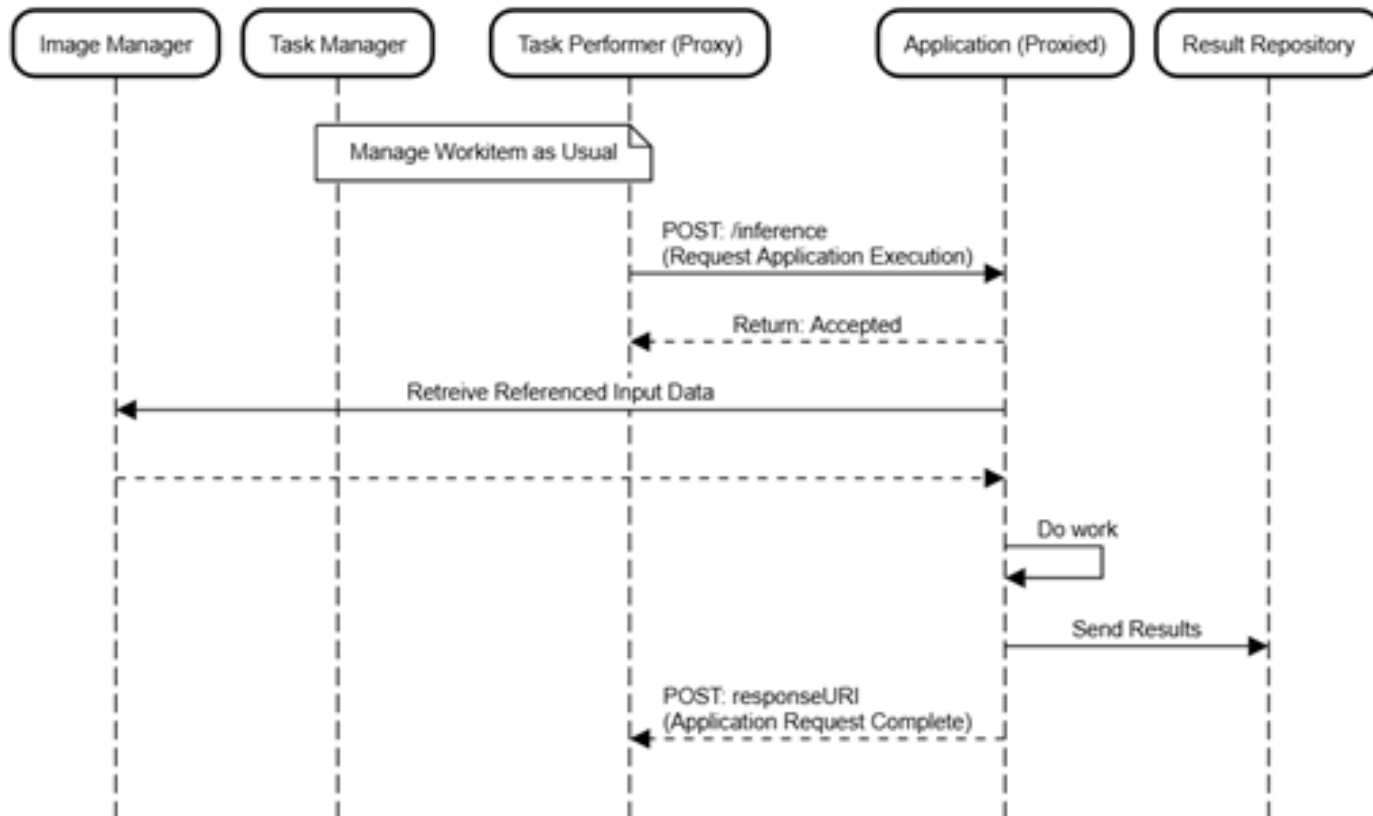


- Rise in Artificial Intelligence and Microservice Applications in medical imaging space
- Work being done under NWIP # 2020-08-A – Service Discovery and Control
- Previous Supplement 224 work was paused and scrapped due to inability to agree on scope
- Updated Application Program Interface (API) and retire previous PS3.19 SOAP API
- The API was first proposed by the American College of Radiology's Data Science Institute (ACR DSI)
- Extended by the MONAI Deploy Informatics Gateway (MIG) for inference requests
- This API fills the gap in IHE's AI Workflow for Imaging (AIW-I) profile where a Task Performer (Proxy) communicates and exchanges input data to perform inference and exchange results

# Proposal



# Proposal



# Real-World Implementation



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## Inference Request APIs

The inference endpoint provides a RESTful interface for triggering a new inference request that is compatible with the ACR DSI API.

**WARNING**

This API is a work in progress and may change between releases.

**NOTE**

The inference API is extended based on the draft created by the ACR (American College of Radiology). Please refer to [ACR's Platform-Model Communication for AI](#) for more information.

### POST /inference

Triggers a new inference job using the specified DICOM dataset from the specified data sources.

**IMPORTANT**

For input and output connections that require credentials, ensure that all the connections are secured and encrypted.

#### Parameters

See the [InferenceRequest](#) class definition for examples.

Return Content-Type: JSON

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**IN THIS ARTICLE**

- POST /inference
- GET /inference/status/{transactionId}

MONAI AI - <https://monai.io/monai-deploy-informatics-gateway/api/rest/inference.html>

IHE AIW-I [https://www.ihe.net/uploadedFiles/Documents/Radiology/IHE\\_RAD\\_Suppl\\_AIW-I.pdf](https://www.ihe.net/uploadedFiles/Documents/Radiology/IHE_RAD_Suppl_AIW-I.pdf)

# Issues/Concerns



- MONAI and ACR Approval
  - Contacts
    - Brad Genereaux – Nvidia
    - Brian Bialecki – ACR
- As this is currently implemented, and in use, trying to make little changes
- Future IHE CP to fill gap