

# AI Import Project – Take 2

## Introduction

In 2023, Inkscape hired a freelance developer to implement the internal file format of Adobe Illustrator. The vote and proposal can be found in the [mailing list archive](#). For Inkscape, this program had two objectives: get crucial experience in how to setup and manage contractual development, and delivering the AI importer to our users.

While the first objective was met – we’ve since had the very successful GTK4 import mega-project, as well as two installments of the Bugfix Accelerator program, deepening our experience of managing both internal and external contractors – the second objective was only partially met. Due to a mismatch between contractor and project, the hiring team decided to not extend the contract for the second half (the project was split into two parts of USD 10,000 each), and the work on the AI importer subsequently stalled after fall 2023. The completed and remaining work packages are detailed in the next section.

This year, we’ve hosted a successful GSoC project to decode and import another proprietary format, Affinity Designer files ([repository link](#)), which will even be included in the upcoming 1.4 release. This renewed the developer team’s interest in completing the support for AI files.

Herein, we propose to hire a developer to complete the AI import project, starting in fall 2024.

## Work packages

Current state of the AI Importer ([repository link](#)):

- .ai files are PDF files with the actual AI data embedded in PrivateData tags, usually deflated or zstd-compressed. We can extract this data in all known versions of Illustrator,.
- A parser for those files reads them into an intermediate data structure ([merge request](#)). The parser works with all known Illustrator versions.
- The intermediate data structure is traversed to output the SVG. Currently supported features: Units, Page dimensions / multipage documents, Rectangles (with corners LPE), Ellipses, paths. Preliminary work on placing text elements (no style) is available. Some work by the previous contractor on other features (Raster images, styles) is available, but needs to be rewritten.
- There is a significant amount of “decoding documentation” for additional features available, which needs to be converted into Python code.

This leaves the following work packages:

- Follow and implement the items listed on the [Features list](#). Ensure proper test coverage for each item. The items are grouped by importance, and gives the PLC a good measure on

whether the project was successful or not.

- In the process, refactor the obsolete code of the previous contractor where deemed useful.
- Decode the format by creating test files whenever official documentation is insufficient. Document the findings.
- Validate the importer and the features list using the test files graciously donated by our users.
- Publishing the AI Importer package on the relevant repositories (e.g. pypi)

## Eligibility and requirements

As opposed to the 2023 AI import project, we are seeking an experienced developer who is already acquainted with the Inkscape project. Therefore applications are restricted to

- Inkscape members (as defined by the FSA)
- that have recently contributed (total of  $\geq 5$  merged MRs in any of the Inkscape group's Python repositories since the 1.3 release, July 23, 2023).
- and are available (on average) at least 15hrs per week for the program, as a lower time commitment was one of the main issues identified in the retrospective with the previous contractor.

## Hiring team

The hiring team consists of 2 volunteers from the PLC (Martin Owens, Jonathan Neuhauser). Hiring team members may not apply themselves.

From the pool of eligible applicants, the hiring team will select one contributor. The selection process will be made transparent to the applicants.

## Financials & Contract

A budget of USD 10'000 is allocated to the program.

The SFC will offer the contractors a fixed-rate contract for a total number of hours, for a total duration of 6 months. The base rate is USD 40/hr, but can be adjusted to high cost-of-living areas. The contractor sends invoices listing the spent time to the SFC at the end of each month and documents their work in a blog post on the Inkscape website.

The contractor is reimbursed for an Illustrator license for the duration of the contract.

The details of the contract negotiation and payment are handled by the SFC.

If a contractor still has hours available after finishing the relevant part of the AI importer, they may use them to work on other parts of the extensions / import+export system, after consultation of the

hiring team.

## **Schedule**

The proposal will be voted upon in August/September 2024, followed by a 1-week call for applications (to developer mailing list and the #team\_devel chatroom), selection and contract negotiation, so that work could start until the end of September 2024.

## **License**

The work done by the candidate will be licensed as GPL2+.