

Replace binary images with lighter SVG counterparts #3466

New issue

Closed

3 tasks done

xmfcx opened this issue on Apr 27, 2023 · 11 comments



xmfcx commented on Apr 27, 2023

Contributor

Checklist

- ☒ I've read the [contribution guidelines](#).
- ☒ I've searched other issues and no duplicate issues were found.
- ☒ I've agreed with the maintainers that I can plan this task.

Description

I've sorted the files in the `autoware/src` directory by the file sizes.

Used the following command to list them by the size:

```
find . -type f -printf '%s %p\n' | grep -v '/\n'
```

./universe/autoware.universe/planning/planning_test_utils
./vehicle/sample_vehicle_launch/sample_vehicle_descript
./universe/autoware.universe/perception/detected_object
./universe/autoware.universe/planning/behavior_path_plar
./universe/autoware.universe/planning/behavior_path_plar
./universe/autoware.universe/planning/behavior_path_plar
./universe/autoware.universe/planning/behavior_path_plar
./universe/autoware.universe/perception/probabilistic_occ
./universe/autoware.universe/planning/behavior_path_plar
./universe/external/muSSP/input_MOT_seq07_followme.tx
./universe/autoware.universe/planning/behavior_velocity_l

Assignees

No one assigned

Labels

- priority:low
- status:help-wanted
- type:documentation
- type:good-first-issue
- type:new-feature

Projects

Planning & Control Working Gr...

Status: Done

Milestone

No milestone

Development

No branches or pull requests

5 participants



./universe/autoware.universe/planning/behavior_path_plar
./universe/autoware.universe/perception/traffic_light_visu
./universe/autoware.universe/planning/planning_debug_tc
./universe/autoware.universe/perception/occupancy_grid_
./universe/autoware.universe/planning/behavior_path_plar
./universe/autoware.universe/planning/behavior_path_plar
./universe/autoware.universe/planning/behavior_path_plar
./universe/autoware.universe/planning/behavior_path_plar
./universe/autoware.universe/perception/traffic_light_map
./universe/autoware.universe/planning/behavior_path_plar
./universe/autoware.universe/planning/behavior_path_plar
./universe/external/ndt_omp/data/251371071.pcd
./universe/external/ndt_omp/data/251370668.pcd
./universe/external/muSSP/muSSP/cmake-build-debug/mu
./universe/autoware.universe/planning/behavior_velocity_
./universe/autoware.universe/planning/behavior_velocity_
./universe/autoware.universe/system/bluetooth_monitor/d
./universe/external/muSSP/img/mcf_efficiency.png
./universe/autoware.universe/planning/behavior_path_plar

Purpose

We can replace the png files by their svg counterparts to reduce the overall file sizes. And help them make more git friendly.

Also the large svg files contain binary images, they should also be replaced by vector image counterparts.

Otherwise it will keep inflating the git history unnecessarily.

Possible approaches

Trace them with tools like Adobe Illustrator and replace them with the light vector images.

Definition of done

At least these top 20 items are reduced to vector images.
(Not all items in the list are images but this is a start)



xmfcx commented on Apr 27, 2023

Contributor

Author

@kenji-miyake I think we should add a rule in documentation to not allow binary image contributions.

(I don't know if it's practical to add a CI check for this.)

Maybe we can use this <https://github.com/ppremk/lfs-warning> to prevent them from being contributed.



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xmfcx commented on Apr 27, 2023

Contributor

Author

For example,
Following file:

https://github.com/autowarefoundation/autoware.universe/blob/main/planning/behavior_path_planner/image/avoidance/avoidance_design.fig1.drawio.svg

Has no reason to be this large.

But it has many binary images inside which can be replaced with vector images.



xmfcx added this to **Autoware Labs** on Apr 27, 2023



xmfcx added **type:good-first-issue**
Type:improvement **type:documentation** labels
on Apr 27, 2023



xmfcx moved this to **Todo** in **Autoware Labs**
on Apr 27, 2023



xmfcx added the **status:help-wanted** label
on Apr 27, 2023



VRichardJP commented on Apr 27, 2023 •

edited ▼

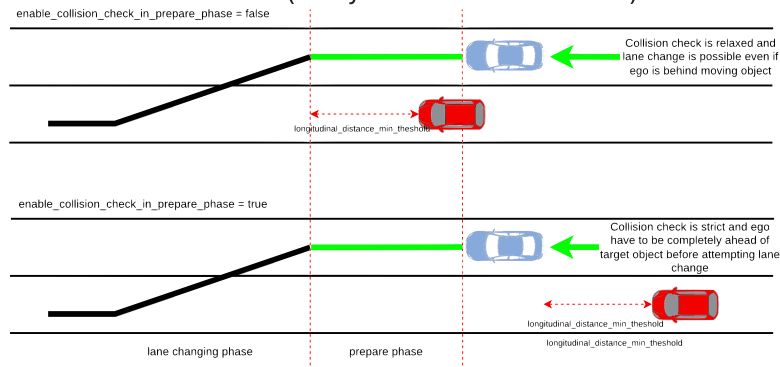
Contributor

I don't know a thing about graphic software, but from a quick google it seems Inkscape has quick auto-vectorization tool:

https://github.com/autowarefoundation/autoware.universe/blob/main/planning/behavior_path_planner/image/lane_change/enable_collision_check_at_prepare_phase.png

- Path > Trace Bitmap...
- Tab: Multicolor
- Detection Mode: Color
- Remove Background

Took me 30 seconds (sorry for dark mode users):



Size before: 7MB

Size after: 650KB

I don't know if it is a very clean SVG, in particular text is not stored as text, but it could be a quick and effective way to reduce image size. The better way would be to have access to the original files.



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kenji-miyake commented on Apr 28, 2023

Contributor

https://github.com/autowarefoundation/autoware.universe/blob/main/planning/behavior_path_planner/image/avoidance/avoidance_design.fig1.drawio.svg

Has no reason to be this large.

I'm not sure, but it might have some meta data for re-editing in `draw.io`.



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kenji-miyake commented on Apr 28, 2023

Contributor

@kenji-miyake I think we should add a rule in documentation to not allow binary image contributions.

[@xmfcx](#) I remember you said we can consider utilizing `git-lfs` for images. Did you find any problem with `git-lfs` and change your mind?

(I don't know if it's practical to add a CI check for this.)

If we really disallow image files, I think checking on CI is good.



xmfcx commented on Apr 28, 2023 •

Contributor

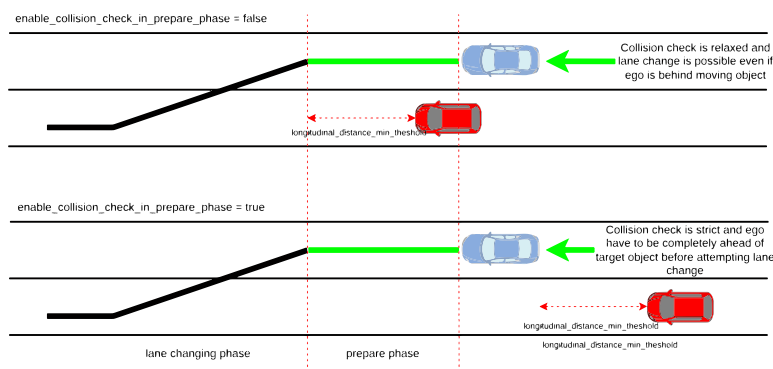
Author

edited ▼

[@VRichardJP](#) thanks, I didn't know Inkscape could do it too.

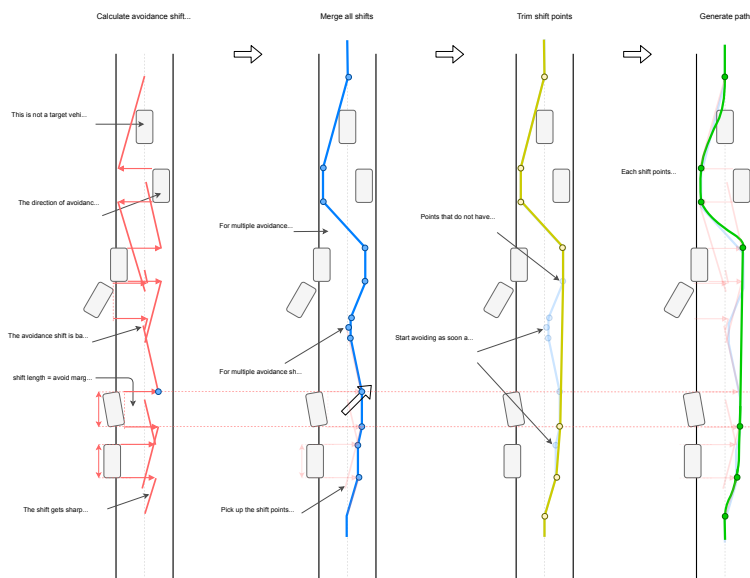
I could get following in Illustrator following

<https://helpx.adobe.com/illustrator/using/image-trace.html>



I'm not sure, but it might have some meta data for re-editing in draw.io

[@kenji-miyake](#) it's likely. Because when I opened the file with Illustrator and just saved it back without doing anything, it got reduced to 25KB.



We can still utilize git-lfs, but just for light vector files, it might not be necessary.



kenji-miyake commented on May 1, 2023

Contributor

@xmfcx By the way, how critical is this issue? Do you have any specific problems caused by the repository size?



xmfcx commented on May 1, 2023

Contributor

Author

By the way, how critical is this issue? Do you have any specific problems caused by the repository size?

I'd say it has normal priority. Keeping repo small in general is a good practice. And earlier we do this, better it is. Because these binary files keep making the .git folder larger and larger with no return.

I've realized this while investigating why the autoware folder was so large. Then realized these images and it'd be a good thing to do if anyone would like to spare some time.

It'd be the best if people who contributed these files put here the lighter versions instead, since we might lose some quality otherwise.



xmfcx added this to **Planning & Control Working Group** on May 30, 2023



xmfcx moved this to **Todo** in **Planning & Control Working Group** on May 30, 2023



xmfcx mentioned this issue on Jun 8, 2023

feat: invalid lanelet documentation

Merged

autowarefoundation/autoware-documentation#337

4 tasks



xmfcx commented on Jun 8, 2023

Contributor

Author

@xmfcx I remember you said we can consider utilizing `git-lfs` for images.

Did you find any problem with git-lfs and change your mind?

We had a discussion with the Autoware Planning & Control team in the [WG meeting](#).

[@kenji-miyake](#)

The common agreement was that the draw.io metadata information (the binary blob) in the files are important for the team. We should keep them.

And to allow this, I had 2 solutions:

- Add `git-lfs` support for the image and binary files. (my preference)
- Replace the `.svg` files with smaller versions. But collect and host the original `.drawio.svg` files in some google drive, have links to them in the documentation. (too complicated and hard to maintain)

[@esteve](#) do you think adding `git-lfs` tracking to the generic image files in the middle of repository timeline might have any unknown side effects?

I would like to go with this option but we also need to update the documentation, maybe ansible scripts, maybe for certain CI actions (like mk-docs generation) to have this support.



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esteve commented on Jun 8, 2023

Contributor

[@esteve](#) do you think adding `git-lfs` tracking to the generic image files in the middle of repository timeline might have any unknown side effects?

I don't know of any side effects, but I agree with using `git-lfs` for storing the `.svg` files.



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 **mitsudome-r** mentioned this issue on Jun 20, 2023

**docs(design/autoware-interfaces):
add sensing interface**

 Merged

autowarefoundation/autoware-
documentation#328

 4 tasks



 **xmfcx** mentioned this issue on Oct 4, 2023

**build(tvm_utility): remove download
logic from CMake and update
documentation**

 Merged

autwarefoundation/autware.univers

e#4923

📋 4 tasks



 **xmfcx** added **type:new-feature** **priority:low** and removed **Type: improvement** labels on Nov 14, 2023




mehmetdogru commented on Feb 15


Contributor

@xmfcx agrees on closing the issue.




 **mehmetdogru** closed this as completed on Feb 15



 **github-project-automation** **bot** moved this from **Todo** to **Done** in **Autware Labs** on Feb 15



 **github-project-automation** **bot** moved this from **Todo** to **Done** in **Planning & Control Working Group** on Feb 15



 **xmfcx** removed this from **Autware Labs** on Mar 18