I'm happy to announce that version 2.0 of Microsoft365R, the R interface to Microsoft 365, is now on CRAN! This version adds support for Microsoft Teams, a much-requested feature.

To access a team in Microsoft Teams, use the `get_team()` function and provide the team name or ID. You can also list the teams you're in with `list_teams()`. These return objects of R6 class `ms_team`, which has methods for working with channels and drives.

```
list_teams()
team <- get_team("My team")

# list the channels in a team (including your private channels)
team$list_channels()

# get the primary channel for a team
team$get_channel()

# get a specific channel
team$get_channel("My channel")

# drives for a team
team$list_drives()
team$get_drive()
```

A drive is an `ms_drive` object, so if you're already using Microsoft365R to interface with OneDrive and SharePoint document libraries, you already know how to use a team's drives. Each team will generally have at least one drive, and possibly two: the default "Shared Documents" drive, which is where uploaded files are stored, and the "Teams Wiki Data" drive, if the team has a wiki. Each team channel will usually also have an associated folder in each drive.

```
drv <- team$get_drive()

# one folder per channel
drv$list_files()

# upload will appear in Files tab of "My channel" in the Teams client
drv$upload_file("myfile.csv", "My channel/myfile.csv")
```

Channels

A team object has methods for listing, retrieving, creating and deleting channels. However you should not create and delete channels unnecessarily, since Teams tracks all channels ever created, even after you delete them. In turn, a channel object has methods for listing and sending messages, and uploading and deleting files.

Channel messages

Teams channels are semi-threaded. Getting the list of messages for a channel retrieves only the first message in each thread; to get an entire thread, you get the starting message and then retrieve the replies to it. Note that channels don't have nested replies, so you can't reply to a reply—only to the starting message.

The body of a message is part of the list of properties returned from the host, and can be found in the `properties` field of the object. Other properties include metadata such as the author, date, list of attachments, etc.

```
chan <- team$get_channel()

# retrieve most recent messages from the server
msgs <- chan$list_messages()

# get the latest message by ID
msg <- chan$get_message(msgs[[1]]$properties$id)

# body of the message
msg$properties$body

# 10 most recent replies
repl_list <- msg$list_replies(n=10)

# body of an individual reply
repl_list[[1]]$properties$body
```

You can send a message to a channel as plain text (the default) or HTML. A message can also include attachments and inline images.

```
# sending messages to a channel
chan$send_message("Hello from R")
chan$send_message(
    "
Hello from *R*
", content_type="html")

# attachments and inline images
chan$send_message("Hello with attachments",
    attachments=c("intro.md", "myfile.csv"))
chan$send_message("",
    content_type="html", inline="graph.png")

# send a reply to a message
msg <- chan$send_message("Starting a new thread in R")
msg$send_reply("Reply from R")
```

Currently, Microsoft365R only supports messaging in channels. Support for chats between individuals may come later.

Channel files

Uploading a file to a channel will place it in the channel's drive folder. The channel object itself provides convenience functions to list, upload and download files. It also provides a `get_folder()` method to retrieve the folder for the channel, as an `ms_drive_item` object; this object has more general methods for working with files.

```
# files for the channel
chan$list_files()
```

```
# upload a file to the channel
chan$upload_file("myfile.docx")

# open the uploaded document for editing in Word Online
chan_folder <- chan$get_folder()
item <- chan_folder$get_item("myfile.docx")
item$open()

# download it again
item$download(overwrite=TRUE)
```