

# APEX STANDARDS

Towards 3GPP R19 Success: Athens 2024 Working Group's Public Access Program

Special Program P6000232  
3GPP WG Athens 2024  
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**A**thens Update: The 3GPP community has reached a milestone with Release-18 nearing completion at the Edinburgh meeting in December 2023. The next phases include the cold freeze in March at the Maastricht Plenary, final cleanup in June at the Shanghai Plenary, and the start of implementing Release 18 features in September at the Melbourne Plenary. This progress is a step towards 6G technology. Apex Standards is providing an updated search tool for the 3GPP community. This tool will be useful for the Athens Working Group meeting from February 22 to March 6, 2024, in Athens, Greece. It will help meeting participants prepare and summarize, focusing on analysis and discussion for building consensus.

## Motivation

In recognition of the dedication and effort of the 3GPP standardization community, we are honored to introduce a specialized TDoc search tool to coincide with the kickoff of Release 19. This tool is designed to enhance collaboration and efficiency during 3GPP meetings, starting with the upcoming meetings in Athens, Greece. Our aim is to support the efforts in shaping the future of 6G by making every meeting as productive and seamless as possible. The search tool is tailored to offer insights and complement your existing workflow, review process, and preparation steps for 3GPP meetings. It serves as a primary resource for exploring unfamiliar ideas and a supplementary option to address potential blind spots, ensuring a thorough understanding of known areas of expertise.

## Public TDoc Search

Our comprehensive TDoc search tool is tailored to the needs of the 3GPP community, facilitating both the preparation for and summarization of meetings. Available publicly from Thursday, February

22, 06:00, to Wednesday, March 6, 2024, 18:00 Athens/CET (Central European Time), this tool provides near real-time search functionality, comprehensive access to documents including TDoc, Drafts, Chairman Notes, Moderator, Rapporteur, Breakout Session notes, Meeting Reports, and much more. It is designed to be user-friendly, with features such as context highlighting to enhance navigation, precision and usability.

## Features

**Friendly User Interface:** Designed to be intuitive and responsive. It's quick, allowing for immediate feedback and results, and supports multi-faceted searches to satisfy diverse analysis needs.

**Restriction:** Each search query is limited to 10 results. This approach ensures that users are presented with the most recent and relevant documents first, streamlining access to crucial information.

**Prioritization:** The tool prioritizes results based on recency. Each result clearly displays its age, measured in hours or days, to help users assess the timeliness of the information.

**Coverage:** With a cutoff date of October 1, 2023, the search functionality covers the previous 3GPP meeting cycles in Xiamen, Chicago, Edinburgh, and forthcoming, Athens. This feature is invaluable for current meeting tracking and facilitates historical comparisons, aiding in a deeper understanding of the evolution of discussions and standards.

**Iterative Refinement and Record Keeping:** The tool incrementally generates Session IDs with timestamps for each Query-and-Answer (Q&A) session, enabling precise tracking. This facilitates efficient record-keeping and future review, keeping insights accessible and well-organized.

## Logical Modifiers to Support Sophisticated Searches

Enhance your search precision with the following logical modifiers, tailored to meet your specific analysis requirements.

### Default Search Logic

**AND Operator:** Searches default to the AND logic, requiring all keywords or their variants to be present. For example, searching **beam correspondence** retrieves documents with both "beam" and "correspondence."

### Key Modifiers

**OR (!):** Broadens your search to include any listed terms, e.g., **R1 | S2** for documents in RAN 1 or SA 2.

**Negation (-):** Excludes terms, e.g., **Qualcomm -Huawei** for documents mentioning Qualcomm but not Huawei.

**Exact Phrase ("):** Finds exact phrases, e.g., **"hybrid beamforming"** targets documents with this phrase using the double quote enclosure.

**Wildcard (\*):** Enables flexible matching, e.g., **PU\*C\*** could find PUSCH, PUCCH, and PUCCH-FI.

**Stemming:** Enhances search flexibility by expanding queries to include variants of the root word, thereby broadening term coverage. For instance, searching for **correspond** will yield documents containing "correspond," "corresponds," "corresponding," and "correspondence," etc.

### Usage Notes

Be mindful when using wildcard and stemming, as they can yield unexpected results. For example, searching "carrier\*" may also return "carriage" due to stemming.

[www.apexstandards.com/athens2024/](http://www.apexstandards.com/athens2024/)

Thu, Feb 22, 08:00 AM – Wed, Mar 6, 2024, 06:00 PM (Athens Central European Time)

## Refinement and Thorough Documentation

Users can refine their search criteria. Each Q&A receives an incrementally generated Session ID, which enables step-by-step analysis that build upon previous results. When a new Q&A session is created, it is layered atop the results of prior sessions. The browser's session history logs each search process, capturing iterative refinements, comparisons, the uncovering of new concepts, and exploratory analyses. This includes detailed records of timestamps, keyword terms, logic modifiers, and filtering criteria used in each session. Apex Standards does not retain these records. Therefore, users are encouraged to preserve their search history for future reference, such as by printing the browser page into a PDF.

## Terms and Conditions

This complimentary service is offered free of charge and with no obligations, reflecting our dedication to advancing the 3GPP community's work.

## Best Wishes for the Delegates to Athens!

*As you journey to Athens, we wish you safe travels and a meeting beyond expectations. May your discussions in the historic land be insightful and your stay joyous and rewarding.*

For any questions or feedback, please do not hesitate to get in touch:

[support@apexstandards.com](mailto:support@apexstandards.com)

[www.apexstandards.com](http://www.apexstandards.com)

# APEX STANDARDS

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## Apex Standards Lite 3GPP Search Tool Specification Fact Sheet

**Motivation:** Celebrating the Release-19 kickoff with 6G in sight.

**URL:** [www.apexstandards.com/athens2024/](http://www.apexstandards.com/athens2024/)

**Accessibility:** The tool is 100% open to the public, accessible via web browsers without the need for local software or app installation.

**Device Compatibility:** Web-based and fully compatible with computer browsers, as well as iPad/tablet and iPhone/smartphone browsers.

**Service Period:** Thu, Feb 22, 06:00—Wed, Mar 6, 2024, 18:00 Athens/CET.

**Document Coverage:** From Oct 1, 2023, to the near present, including documents from prior meetings in Xiamen, Chicago, Edinburgh, to the ongoing in Athens.

**Comprehensive Features:** Includes TDoc and all Inbox files, with flexible filtering capabilities for cross-checking. All records are privately saved in your local browser, underpinned by HTTPS security.

**Support for All Working Groups:** The tool is designed to assist members across all 3GPP working groups.

**Terms and Conditions:** Access is 100% complimentary, free of charge, and without commitment. Apex Standards reserves the right to refuse service to anyone.

*This tool is a testament to Apex Standards' commitment to facilitating progress within the 3GPP community, ensuring participants have the resources they need for a productive and informed meeting experience.*

## Specify Keyword Locations

## Flexible Filtering Capabilities

### Search For TDoc

### Search For Inbox Files

Document Type:  Regular TDoc  Inbox, Drafts, Chairman, Moderator, Rapporteur, Session Notes, Meeting Reports

beam management

AI/ML

Keywords in TDoc Abstract

**Session 24** On Thu, Feb 22, 2:34 PM PST, your search criteria:  
Search scope: **Regular TDoc, as well as, Inbox, Drafts, Chairman, Moderator, Rapporteur, Session Notes, Meeting Reports (Marked as 'Inbox')**  
Keyword in document: **beam management**  
Keyword in TDoc title: **AI/ML**  
3GPP TSG or WG: **RAN1**  
TDoc-Source/Contributor: **Qualcomm**  
Release: **19**  
Earliest TDoc Date: **2024-02-15**

Took 0.044 seconds. Search results are organized in descending order of recency, with the most recent documents displayed first.

- [www.3gpp.org/ftp/TSR/RAN/WG1\\_RL1/TSGR1\\_116/Docs/R1-2401430.zip](http://www.3gpp.org/ftp/TSR/RAN/WG1_RL1/TSGR1_116/Docs/R1-2401430.zip) Feb 19, 2024 Athens (3 days ago)  
Meeting: R1\_116 / TDoc: R1-2401430 / Agenda Item: 9.1 Artificial Intelligence (AI)/Machine Learning (ML) for NR Air Interface (NR\_AIML\_Air) / Status: available / Rel: Rel-19 / Related Work Item: NR\_AIML\_Air-Core  
Title: Work plan for Rel-19 WI on AI and ML for NR air interface  
Document Source/Contributor: Qualcomm Incorporated  
Where your keyword(s) appear.  
Rel: Rel-19  
Document Source/Contributor: Qualcomm Incorporated  
Title: Work plan for Rel-19 WI on AI and ML for NR air interface  
Meeting: R1\_116  
Content: Specification support for **beam management** Agenda items 9.1.1 will provide the specification support for **beam management** as recommended by the Rel-18 SI ..... Proposal 2: focus specification support on features strictly necessary to realize the gains of AI/ML based **beam management** ..... Proposal 2: focus specification support on features strictly necessary to realize the gains of AI/ML based **beam management** ..... For AI-based **beam management**, from RAN1 perspective, at least the following are recommended for normative work: - Both BM-Case1 and BM-Case2: - BM-Case1
- [www.3gpp.org/ftp/TSR/RAN/WG1\\_RL1/TSGR1\\_116/Docs/R1-2401435.zip](http://www.3gpp.org/ftp/TSR/RAN/WG1_RL1/TSGR1_116/Docs/R1-2401435.zip) Feb 19, 2024 Athens (3 days ago)  
Meeting: R1\_116 / TDoc: R1-2401435 / Agenda Item: 9.1.3.3 Other aspects of AI/ML model and data / Status: available / Rel: Rel-19 / Related Work Item: NR\_AIML\_Air-Core  
Title: Other aspects of AI/ML model and data  
Document Source/Contributor: Qualcomm Incorporated  
Where your keyword(s) appear.  
Rel: Rel-19  
Document Source/Contributor: Qualcomm Incorporated  
Title: Other aspects of AI/ML model and data  
Meeting: R1\_116  
Content: management - DL Tx **beam** prediction for both UE-sided model and NW-sided model, encompassing [RAN1/RAN2]: Spatial-domain DL Tx **beam** prediction for Set ..... A of **beams** based on measurement results of Set B of **beams** ("BM-Case1") Temporal DL Tx **beam** prediction for Set A of **beams** based on the historic measurement ..... results of Set B of **beams** ("BM-Case2") Specify necessary signaling/mechanism(s) to facilitate LCM operations specific to the **Beam Management** use cases ..... Objective of Performance part WI For **Beam Management** and Positioning Accuracy enhancement use cases, specify performance requirements and test cases for

For Each Q&A, Detailed Search Criteria And Results Are Securely And Privately Kept Within Your Local Browser With Timestamps To Inspire Refinements And Future Referencing.

Keywords And Filtering Criteria Are Highlighted Within The Original Documents You've Searched, Ensuring Maximum Clarity And Enabling Immediate Evaluation Of Relevance.